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The Adjustment of Marital Problems*

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■ ONE of the most deeply entrenched traditions of medicine is that of "the family doctor." This man has been free to move from one social stratum to another. He was welcome in all homes as a guest; few had any hesitancy about asking his advice when there was a need, even though there might have been no money to pay his fee.

The tradition of the family doctor, who drove his horse through snow banks and blizzards, rested not only on his ability to alleviate pain and suffering and his ability to restore to health the wage earner and the housewife, but also equally as much on his ability to serve as a family counselor.

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His knowledge of law might not have been as extensive as that of local attorneys, but his knowledge of human nature frequently helped people to avoid the courts of law. Sometimes he could effect a settlement between two individuals who were both patients; at other times he could suggest that the Judge or the Prosecutor be lenient in a deserving case. He rarely counseled divorce, for from his point of view he felt that it was unnecessary; that people could be kept together even though they might have their trials and tribulations. Occasionally the husband might be a drunkard who abused his wife; and in cases where there were children to consider, the family doctor would expend as much effort to aid the family in its social adjustment, as he would to set a broken leg or to cure a case of pneumonia.

Family relations institutes are being set up in various parts of the country by private agencies, of which the one in Los Angeles headed by Dr. Popenoe† is a classic example. Courts in Philadelphia, New York, and Chicago, as well as Detroit, have clinical facilities for aiding in the medical and psychiatric adjustment of these people. Our clinic has seen well over a thousand Domestic Relations cases, has aided in the adjustment of some, has referred others to private physicians or to public agencies for help. There are certain premises which must be set up in dealing with cases involving domestic relations situations. Some of these will be discussed in detail.

In the first place, it must be remembered that the married couple must be considered as two integrated but individual organisms. Each one possesses a personality which is built up through the years, and which is distinctive from the other. Each personality started with the genesis of their respective family trees, as the ancestors con-

†cf. Popenoe, P., *Modern Marriage*, New York, The Macmillan Company, 1940, p. 299.

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tributed to each one of the couple by giving to him or to her points of strength or weakness which the early environment, adolescence, maturity, and marital life had modified.

There is no known group of individuals who, as a group, are not marriageable. For example, there is no non-marriageable race, or obviously no non-marriageable limitations on size, for midgets can marry and make a successful adjustment and so can giants within their own groups. The color of hair and eyes, and other factors in the physique (in themselves inherently), mean nothing in causing or solving the problem of marriage.

In dealing with marriage, which we recognize as a socio-medical problem, the old-fashioned doctor possessed fewer scientific aids than he did in his strictly medical practice, which a few generations ago had none too many resources at hand. The study of psychiatry was still in its infancy, especially the type or division of psychiatry not primarily concerned with the diagnosis and treatment of psychoses, but which was designed to give assistance to people in the art of getting along with one another. In spite of his lack of formal precept, he achieved great success because his common sense guided him, and his affection for his patients was limitless.

Today perhaps we have less actual attachment for the patient but more science in our armamentarium. Every physician sees cases involving domestic conflict in his office, perhaps daily, depending on his clientele. Sometimes the case comes to him because there is nowhere else to turn. Some physicians are faced with domestic adjustment problems because of the nature of their specialties. This is particularly true of the men in the genito-urinary, gynecological, and obstetrical fields, as well as in the fields of the pediatrician and the psychiatrist. I have mentioned these specialties in particular, but the general practitioner would likewise examine and treat as many cases as the specialist if he were in a neighborhood where his patients were accustomed to come to him with troubles beyond mere aches and pains. The orthopedist sees cases of laborers or others who need bone and joint correction, in order that they may continue to support their families.

Domestic adjustment offers a problem which is as deeply integrated with medicine as the problem of bacterial infection. Much research has been done in this field. Nevertheless, between

two individuals, body build, color, education, physical condition, religion, when endowed with special significance by one of the partners, can become primarily responsible for marital conflict.

A number of studies have been made, primarily by sociologists, to show that individuals who come from different racial origin, such as the mulatto, the Chinese-white cross, Indian-Negro—even Indian-white cross, have less chance in a successful marriage than when both are of the same genesis or when the racial intermarriage is acceptable to both races, so that the best elements of both races are brought together, such as Hawaiian and Chinese cross. The Irish and German combination in this country seems to be less successful than even Irish-Irish, Scotch-Irish, even Irish-English—I say “even” because of the fact that there are cultural problems of a “traditional nature” that arise from this last combination.

The treatment of domestic relations problems lies in three spheres. The first sphere is the premarital treatment. In other words, the prevention of marital discord by advice and correction of defects before marriage. This lies in the field of sex education, education for marriage, as well as medical care. The universities, the Y.M.C.A.'s, and churches are doing a great deal along the first two lines. I feel that this type of work when carried on by laymen must not be encouraged to too great an extent, but there is no reason why, in certain spheres of marriage, such as the economic and purely biological, theoretical advice by properly trained people cannot be given. However, it is not the place of this paper to discuss this sphere. Premarital advice is deserving of extensive treatment and, as a matter of fact, all books on marital adjustment contain discussions of these matters.

The other two phases, postmarital and pathological, are of greater importance. The prevention of marital conflict after marriage is concerned with correction of the emotional adjustment or physical ailments which may occur after marriage by means of competent advice and help in understanding each other, particularly by the family physician. The third, and the largest, sphere of domestic relations adjustment lies in the correction of pathology. This pathology may be due to false fantasy life or infantile concepts of marriage because each partner was not being truly himself during the courtship, or even actual neuroses, and may reveal itself in fights,

in endless arguments or disagreements between the members of the marriage.

General Causes of Domestic Difficulty

Physical Disability.—By physical I mean not only sicknesses and ailments of a general systemic nature which preclude the husband working or the wife taking care of the house, but also those disorders of the sexual function which prevent sex satisfaction in marriage.

Some individuals believe that there is a tendency on the part of psychiatrists to over-emphasize the significance of sexual maladjustment, but it is certainly true that persons who are maladjusted sexually are more apt to be irritable, and in other ways to present special problems because they are unable to hide their real feelings. A husband says his wife will not receive him sufficiently, frequently, or with sufficient show of enjoyment so he in turn rejects his wife and frequently stays away from home. This behavior consequently gives rise to jealousy and suspicions of various kinds.

From a treatment standpoint it is possible for the mildly sexually maladjusted individual to be taught by his physician to make an adjustment. If there is a vaginal malformation or hypospadias, operative proceedings are possible, but dyspareunia (a condition which frequently brings the maladjusted couple to the physician) is more often on a psychogenic than a somatogenic basis.

The treatment for the physical discord lies specifically in the hands of the physician. If the husband is sickly he can be treated through regular medical means. The wife can be brought to an understanding of his condition and if the treatment is successful it will make the husband a more adequate man both economically and physically.

If the wife suffers from an ailment, the family, particularly one which is economically secure, can, by proper arrangement of domestic service, learn to compensate for her incompetence until such time as she can recover enough to take over her household duties.

Only too often the physician forgets that when there is a physical incapacity of either of the partners in a marriage, there are duties and obligations which must be taken over by the other, and while the doctor may be treating the man his wife will need encouragement, sympathy, and

perhaps an understanding explanation so that she can bear her burden better, and, of course, the reverse is the case if the wife is ill.

Emotional Integration.—The second type of marital dysfunction that needs aid from the physician in adjustment is that which frankly may be called emotional integration. When two strange people find it necessary to live together constantly for a matter of eight or nine hours a day, the similarity of tastes and the identity of interest is bound to find, on the one hand, rough spots, and on the other, sensitive areas upon which the rough spots rub. These can be adjusted by each partner carefully working on these problems and each trying to do things which each knows will add to the happiness of the partner. No two people can be expected to be entirely congenial. Even those who as children have lived next to each other, and have been brought up in the same school, whose parents have moved with the same group, who are members of the same religious faith, these come before the clinician with marital maladjustment requiring some aid.

Often, the physician can encourage each of the individuals to tell him what particular small features in the marriage are most annoying. These can then be tactfully conveyed to the other partner. Among the complaints that newly married men have of their wives' conduct are very small things: such as leaving the cap off the toothpaste, leaving the tools out of the tool chest, straightening out the desk so that "I can't find a thing that I want to lay my hands on when I want it."

Cooking and eating habits of the two partners may lead to conflict. When the husband or the wife has been brought up in restaurants, for example, he or she is apt to like over-cooked meat, canned peas, mashed potatoes. The idea of the highly diversified type of menu to which the person who has been brought up in a wealthy home would be habituated is to the restaurant-raised almost repugnant. Many persons after marriage discover that they have food fads and eating habits which have not been corrected by their parents. They find, in addition, that the mate has other food fads and eating habits and the nutritional problem becomes a severe one not only from a standpoint of nourishment and a balanced diet but also from the standpoint of

enjoying the food. For instance, the husband may like lettuce and cabbage, and the wife may not. The husband may reject starches with the probable exception of pies—most men like them—while the wife may prefer pastries to pie, and would prefer macaroni, potatoes, rice and other inexpensive staples. The typical case of domestic maladjustment of this type is, of course, the well-known Jack Spratt family. The physician who has acquainted himself with diets, preparation of food, its purchase and service (of great importance in specialties dealing with metabolism or gastro-enterology) should be able to give the wife advice for gradually weaning her husband over to adjust to the mate's food habits.

Economic Maladjustment.—A number of cases where husband and wife conflict over the distribution of the joint wealth and over the husband's incapacity to supply the demands of the wife are numerous, and yet I do not believe that their number is as great as the uninitiated suppose. Such conflicts are the most remediable, and yet, for the physician, present the most difficulty, because only too many physicians are not able to handle their own budgets. Problems arise when spending of money for hobbies, books, or special leisure activity is curtailed suddenly. Prior to marriage, plans of specific interest to the individual are frequently made; now all leisure activity must be planned to keep the partner in mind, so that he may share equally or be included in other activities.

There is, in this country, a rapidly increasing body of experts who deal with the handling of the domestic budget. It is surprising to note in newspaper columns, such as those of Nancy Brown or Ruth Alden, how scientifically the income in a household can be rearranged. While the psychiatric advice, which is given only too often by these newspaper writers, is not usually very good—more and more we notice newspapers advising individuals to consult a psychiatrist for solution of their problems. The difficulty of the adviser is to reconcile the desires, ambitions and wishes of either one or both members of the marriage with the actuality of a fixed income or an income which, particularly among the laboring class, is not too stable. It is not the place here to offer arguments for an annual wage, but I am sure that a very large proportion of our domestic relations cases occurring among work-

ing people and arising from economic maladjustment could be obviated if some sort of a consistent budget could be planned. However, reasonable goals must be set. The man who is making \$1800 a year cannot expect to build a house in Palmer Woods nor should the business leader restrict his wife to cotton-print dresses.

Child Guidance.—The fourth group of domestic maladjustments are those which apparently lie in the field of rearing the offspring, and have roots deeply imbedded in the unconscious and do not stem from the obvious surface conflicts. The field of child guidance is an immense one and one of many ramifications. There is insufficient space here to cover all the exigencies that arise, yet, one or two examples will suffice to show how a child may be brought to the pediatrician or to the general practitioner when the actual cause of the symptoms lies not in the child or his mentality but in the attitude of the parents toward one another or toward the child.

Take for example the annoying habit of bed wetting. It is not infrequently the case that when a child is wetting his bed that he is doing it to attract the attention of the mother. The child finds that being a bedwetter he gets a scolding every morning or he might even be awakened in the night to get a scolding. Whether he is getting pleasure or pain from this relationship is not the crucial point but the point is that he is getting attention which he craves.

The question immediately arises as to why he demands this attention. Sometimes it is because the sex adjustment between the parents is inadequate—the mother rejects the father, and because the boy looks a bit like his father, or merely because he is a boy, there is a tendency to reject him. He runs to her with a little piece of paper and wants "mummy" to look at it, she pays no attention and goes along about her business. She may, if financial circumstances permit it, go to card parties in order not to have to take care of the child for an afternoon.

The therapy here primarily lies not with the child, but in aiding the sexual adjustment of the parents. A knowledge of the causes of sex maladjustment is pointed out under the first cause for marital friction. Deep understanding on the part of the physician can be gained only from experience, but he must look for something

more than a palliative means of removing immediate symptoms such as the bedwetting.

Further, as was pointed out by Dr. Gilbert Rich at the last Central Neuropsychiatric Association meeting, if one can devise an apparatus to wake the child up before he wets the bed, this will remove the source of friction and the mother will tend less to reject the child, and in diminishing the rejection of the child may become emotionally more secure and more adjusted to the husband. One can generalize then by saying that the problem child is the child of problem parents and the physician should work on both problems to remedy either.

Another type of marital maladjustment which arises during child rearing occurs when the child shows symptoms of being overprotected or "spoiled." The mother who has lost another child, or who herself had an unhappy childhood, tends to devote too much attention to the child, particularly if it is the only one. The father, coming home and finding the youngster disobedient, quarrelsome and noisy (and having no understanding of the causes of these symptoms) rejects his wife and considers her incompetent. She needs emotional adjustment under these circumstances in the adjustment of her own attitude toward the child so that when this is resolved her attitude toward the husband improves and with an improvement in the child's behavior his attitude toward both is helped. In this particular sphere a lesson to every physician dealing with children can be brought out, for the physician should treat not only the physical ailment of the child but the attitude of the parents while the child is sick. The doctor must not permit too much over-indulgence to compensate for the child's pains. Since it is a tragic occasion when a loved child or husband or wife is lost, the physician cannot shake his head, offer a few words of sympathy, and walk out the door. He must turn his attention to the understanding of the needs of the bereaved one, and suggest, if possible, some other outlet, some other interest, by means of which it might be possible to distract the patient or to prevent a later emotional conflict arising from this bereavement.

Neurotic Mechanisms.—The fifth type of cause of marital dissatisfaction is a deep-seated one. It is one which almost inevitably calls for the aid of the psychiatrist. Merely because it calls

for this aid does not preclude intelligent preliminary treatment on the part of the general physician. This group comprises cases of misidentification, or neurotic mechanisms arising from the setting-up in childhood of serious complex material. An example of a case such as this is the patient who is tied to his mother's apron strings and who develops what, in brief, is called Oedipus Complex, an emotional over-attachment to the mother with incestuous ideas, and hatred for the father. The patient grows up and finds that to his mind no woman is really good enough for him for he is latently homosexual. Yet because of aggressiveness of the woman who is to be his wife in the future or because society seems to demand it of him, he marries. When difficulty develops neither the patient nor his wife can put their finger on the trouble for the complexes are deeply hidden. Perhaps the only symptoms that the man is aware of as he grows up is the fact that has a tendency to worry, or he has a tendency to brood, or perhaps a preference to remain by himself and to be not companionable. Such a patient, when he faces the demands of the marital state, is inadequate, or perhaps he finds himself to be sexually incompetent, or perhaps he is only irritated by the fact that he must feed an extra woman who does not represent his mother, or in some cases who symbolized his mother to such an extent that he has actual feelings of guilt when lying next to her.

The foregoing is only one illustration of the "infantile conflict" type of case and will serve to reveal the problems and their significance in marriage for this vast group of complex-ridden individuals who are neither insane nor diagnosably neurotic. The private physician must learn to recognize that the patient is not necessarily telling him causative facts when he speaks of the things which he dislikes about his wife. A deep attachment to the mother should offer to the physician proof that there is some deep-seated conflict that needs to be taken care of.

External Circumstances.—The last group of domestic maladjusted cases are those which are maladjusted because of external circumstances, such as the interfering mother-in-law; religious conflict in which the priest, minister or rabbi comes to set up in the minds of one or the other of the partners the idea that he or she should not be married outside his faith, conflicts because

of educational differences or differences in interest—where the wife wants to go out and dance night after night because she is still a youngster and feels that dancing is part of her youth, although she married an older man for the security that he can give her—or where the background and experiences of the two partners are widely different. These latter are more familiar to the lay person. One cannot enumerate all of the possibilities in this sphere, even these are available to treatment by the physician. For example, the physician can recommend that the family get away from the offending “in-law.” He can discuss in a rational manner, with a woman who has sufficient intelligence, the fact that she is getting other satisfactions which can be substituted for the recreations which she still thinks she needs. The inadequate mate who does not like symphonies, reading, or intellectual recreation, can often be brought by means of night school or clubs to a level of understanding where an adjustment is possible. But before ascribing the domestic situation to these external causes one should be careful to eliminate all the deeper emotional, economic and the conflictual possibilities.

I want to cite briefly one case which has come to the clinic. “Barbara” is a twenty-two year old white girl who is Canadian born. She was married to a man several years older than herself and she claimed that the husband was assaultive. He emphasized her irritability. While her husband drank, he did not drink to a great extent. He wished companionship which he was not getting from his morose wife. Careful investigation showed that there was nothing in the emotional adjustment, in the economic adjustment, or in the physical adjustment. The sexual relations were satisfactory. However, the wife happened to be a Canadian-born person and the legitimacy of her immigration was in question; there was danger of her being deported to Canada. This problem made her morose so that she was a pest around the house. The husband reacted in an unfortunate fashion to this moroseness, and not knowing the cause he began to stay out. As her maladjustment got worse she believed that he was being unfaithful. By the time that we saw both of these people there seemed to be little hope for the marriage. However, her immigration problem was settled with the authorities; it was found that she was not in any danger of being deported, and it was only

a few months before the family friction cleared up.

To summarize, it can be said that the problem of adjusting domestic relations cases is a complex one. The greatest prevention can be done either in the early days of marriage or premaritally.

However, maladjustments of various types can be treated even after they have gone along for considerable time if the causative factors can be analyzed and worked out, and if both partners will be frank and coöperative. The physician must be sympathetic, and must be willing to look into causes beyond those which would give rise to merely physical symptoms. He must be willing to observe the fields of activity for conflicts on the basis of education, religion, recreation, as well as other fields; he must be aware that unfortunate friends or relatives can set up a conflict and he must know that deep-seated conflicts arise during childhood because of basic infantile neuroses. This last type, of course, is a very frequently found kind of marital adjustment case and I would emphasize that only preliminary work should be done by the physician for the actual cure should be worked out with the psychiatrist.

All in all, each case must be handled as an individual. There is no reason why, by means of a solution of a marital problem, the physician cannot tie to himself a grateful family, in the same way that the old-time practitioner used to do.

MSMS CLINIC

Your name? Your age? Where do you live?
Your height? Your weight? Yes, you must give
Your mother's name. Your father's name.
Your brother's name. Your work? Your wage?
Your boss? Your shop? Here put an X
Right at the top. It means you're poor.
That's all; sit down. And wait, you're poor.
Doctor? No. Sit down, no hurry.
Come? He'll come sometime, don't worry.
Time? It's eight. Time? It's nine.
Time? It's ten. Time? It's time.
Your name? Your age? Hurt much? Hurt here?
Say ahhh, relax. Lean back, draw near,
Say ahhh, breathe out— And out—and in—
Go home? No, wait. The nurse must have
Some facts. Please state your middle name.
Your mother's name. Your father's name.
Your brother's name

By Sala Weltman, age 12, the first prize poem in the annual high school poetry contest in New York City.—From *Westchester Medical Bulletin* and *Connecticut State Medical Journal*.

Uterine Fibroids Complicating Pregnancy*

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THE management of pregnancy complicated by fibroids of the uterus generally entails greater responsibility for the obstetrician than does the management of the normal patient, especially when it may be the last or only opportunity for the individual to have a baby. Since the incidence of complications during pregnancy, labor and the puerperium is higher in these patients than in a similar group of normal patients there is a natural tendency to attribute any abnormality which may arise to the fibroid. This assumed relationship has occasionally led to hasty and even needless interference. Accumulated data and experience have proved that pregnancy complicated by fibroids should be managed conservatively unless interference is clearly indicated.

As pointed out by Lynch⁵ there are, in general, four methods of caring for these patients during pregnancy:

Hysterectomy during early pregnancy. This radical procedure is necessary in only a small percentage of cases and should not be done without first considering other acceptable methods of treatment. In most instances the patient should be allowed to carry the pregnancy to term, at which time abdominal delivery and hysterectomy may be performed if necessary. In a few cases of early pregnancy associated with multinodular tumors the operation may be both justifiable and necessary.

Therapeutic abortion. Interruption of pregnancy certainly does not solve the problem. Because of the distorted uterine cavity the abortion may be difficult and furthermore it does nothing to prevent the recurrence of the same complication with another pregnancy. If the tumors are large enough to prevent the pregnancy from being carried to term immediate hysterectomy is probably indicated.

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Myomectomy. The removal of tumors from the pregnant uterus is no longer granted widespread acceptance. Myomectomy may be successful when there exists a single small tumor, but with multiple nodules it is likely to result in interruption of the pregnancy. The increased vascularity of the hypertrophic uterine musculature makes perfect closure of the tumor bed difficult and bleeding from the operative site is not uncommon.

Mussey and Hardwick⁶ resorted to myomectomy thirty-two times with twelve abortions, three premature deliveries and one maternal death. All of Eisaman's² three operations for the removal of tumors were followed by abortion. Troell¹² reported 157 myomectomies during pregnancy with a fetal mortality of 23.9 per cent and a maternal mortality of 3.9 per cent.

Carry the patient to term. While a program of non-interference is not always desirable it seems to be the most satisfactory method of treatment for the majority of cases.

Occurrence

In the last 5,271 consecutive deliveries at the University of Michigan Maternity Hospital fifty-three were complicated by the presence of uterine fibroids, an incidence of 1 per cent. The incidence in this series compares with those reported by Watson¹³ (1 per cent), Emge³ (1.3 per cent) and Pierson⁷ (0.8 per cent), but is somewhat higher than Campbell's¹ (0.43 per cent) and Pinard's⁸ (0.6 per cent).

Age and Parity. The average age of this group of patients was 34.5 years; the youngest was 19 and the oldest 47. The greatest incidence was between ages 30 and 39 and the lowest among patients under 20 years of age. Twenty-one were primipara and 32 multipara. The parity distribution is shown in Table I.

TABLE I.—DISTRIBUTION OF PARITY

Para 0.....	21
I	9
II	7
III	6
IV	4
V	2
VI	3
X	1

Effect on Pregnancy

Of our fifty-three pregnancies complicated by uterine fibroids, eight, or 15 per cent, had tumors

large enough to require hysterectomy in the early months of pregnancy. The largest of these extended to the right costal margin at fourteen weeks and the smallest reached the level of the umbilicus at the twelfth week of pregnancy. The average age of this group of patients was 39 years. Four of the patients were primipara and four multipara.

There was considerable variation in the size of the tumors in the remaining forty-five patients but all were palpable on the first examination and large enough so that it was the opinion of the examiner that they might interfere with the pregnancy.

Four, or 8.8 per cent, of the forty-five patients aborted between two and one-half and six and one-half months. Three of these had cramps and irregular intervals of bleeding throughout the entire duration of their pregnancies. In the fourth patient termination followed an attempt at replacement of a retroverted incarcerated uterus. The incidence of abortion is somewhat lower than is reported by others. Eisaman² reported abortion is 12.6 per cent and Campbell in 14.7 per cent. Watson¹³ estimates that 15 per cent to 24 per cent of pregnancies complicated by fibroids terminate in abortion and Studdiford¹¹ states that premature termination is three times more frequent than in normal individuals.

The other common complications occurring during pregnancy may be attributed to impairment of the blood supply to the enlarging tumors, which is thought to result in degenerative change.

According to Emge³ there is both an actual and a relative increase in the size of the tumors during pregnancy. The actual enlargement is in a ratio equal to the uterine development and is due to hypertrophy of the tumor elements, edema and an increase in the blood supply. As the uterus enlarges to accommodate the growing fetus the wall becomes thinner and the fibroid nodules become more prominent; this factor plus the true enlargement of the tumors gives an impression of more rapid growth than actually occurs. Tumors low in the posterior wall of the uterus may grow to considerable size leading to their incarceration in the pelvis and, in some instances, to compression of the pelvic soft tissues.

Red degeneration, which usually occurs during the second trimester of pregnancy, presents a fairly typical symptom complex. The usual clinical picture is that of a sudden onset

of pain localized over a fibroid, with a temperature elevation of one or two degrees and a moderate leukocytosis. The tumor is tender to palpation and a definite increase in size may be noted. As the pregnancy advances the fibroids outgrow their blood supply and become relatively avascular; vascularity may be further compromised by torsion of the tumor in its bed due to the intermittent uterine contractions during pregnancy. Infiltration of blood occurs throughout the embarrassed tumor, the resulting hemolysis stains the tissue the typical color associated with red degeneration, which has been compared to that of raw beef. The affected tumor becomes soft and enlarged and, when sectioned, bulges out of its capsule. There occurs tissue necrosis with loss of cell outline, the microscopic picture of infarction, but, as pointed out by Polak, there is usually enough normal tissue at the periphery so the tumor may recover.

The incidence of degenerative changes in fibroids during pregnancy is relatively high. Campbell¹¹ found necrosis to be present ten times more frequently in fibroids from pregnant than from nonpregnant uteri. He performed four myomectomies during pregnancy, three of them to remove degenerated tumors. Of Mussey and Hardwick's⁶ thirty-two myomectomies twenty-one were done for necrosis. Reis and Sinykin¹⁰ removed twenty-three tumors in eighteen operations performed during pregnancy and eighteen of the tumors were reported as showing degenerative change.

As a rule the acute symptoms of degeneration last only from ten to fourteen days and in the vast majority of instances the patient can be carried through this period without excessive risk. With the exception of the eight patients operated upon early in pregnancy none of our patients was subjected to surgery during the antepartum period, although 12.5 per cent developed what we believed to be degenerative tumor changes. All complained of severe uterine pain and on palpation there was marked tenderness in the tumors associated with a definite enlargement. Treatment consisted of bed rest and sedation and in all our cases the symptoms disappeared in from one to three weeks. All the patients in this group were delivered of normal living infants.

Effect on Labor

Obviously in these cases the responsibility of the attending physician increases with the onset of labor. While the incidence of operative intervention naturally rises, such interference should be only on the basis of clear-cut indications. Eisaman² reported operative delivery due to the presence of fibroids in 36 per cent, Mussey and Hardwick⁶ 39 per cent and Campbell¹ 29 per cent. Our total operative incidence in this series was thirty-four per cent. Included in these operative procedures were five cases in which low forceps were used to complete the delivery in primiparæ, but were not done because of interference by the fibroids. When these are subtracted from the total the operative deliveries made necessary by the presence of fibroids in our series is reduced to twenty-two per cent (Table II).

TABLE II.—COMPARATIVE OPERATIVE INCIDENCE DUE TO FIBROIDS

	Percentage	No. Cases
Campbell (1933).....	29.2	82
Eisaman (1934).....	36	71
Mussey Hardwick (1935).....	39	97
Willson (1940)	22	53

The operative deliveries made necessary by interference from the fibroids consisted of: (1) two Porro cesarean sections, one in a patient with uterine inertia associated with the tumors and the other because of a large fibroid mass low in the pelvis; (2) two versions with extraction, the indications being inertia and premature separation of the placenta; (3) one breech extraction; (4) one Dührssen's incision and high forceps after an 86-hour labor; (5) one manual dilatation of the cervix and mid-forceps extraction after a 36-hour labor; (6) one mid-forceps extraction, and (7) one manual rotation of the fetus from a posterior position (Table III).

TABLE III.—OPERATIONS FOR DELIVERY

Porro section	2
Dührssen's incisions.....	1
High forceps extraction	
Manual dilatation cervix.....	1
Mid forceps extraction	
Forceps rotation POP to OA.....	1
Version and extraction.....	2
Mid forceps extraction.....	1
Breech extraction	1
Manual rotation ORP to OA.....	1
Low forceps extraction.....	5

The increased operative incidence in patients with uterine fibroids may be attributed to:

(1) *Inertia*. A uterus studded with tumors is unable to work as efficiently as a normal uterus in which there is nothing to interfere with the action of the muscle fibers. In some instances the body of the uterus may be made up almost completely of fibroids at the expense of muscle. In this type a true primary inertia may be encountered. The characteristics of the contractions in our patients are summarized in Table IV.

TABLE IV.—CHARACTER OF CONTRACTIONS

Normal	Weak	Irregular	Weak and Irregular
48.8%	23%	12.9%	15.4%

In most cases the pains were of good quality if there were only a small number of tumors, but in those patients whose uteri contained many nodules the contractions were poor. Most of the patients whose pains were classified as normal or weak had a normal duration of labor, but those in the last two groups (irregular, and weak and irregular) were more apt to have long labors. Despite the fact that the evaluation was made only by observation of the patient, the type of labor corresponded closely in almost every instance to the type of contractions recorded. (2) *Abnormal Presentation*. There is usually a higher percentage of abnormal positions in these patients. Campbell reported sixty-two per cent cephalic, 2.4 per cent face, 12.2 per cent breech, and 4.8 per cent transverse. In our patients there was less deviation from the normal (Table V).

TABLE V.—POSITION

OLA	ORP	ORA	OLP	POP	MV	B	T
36.8	21	13.1	2.6	5.3	2.6	5.3	2.6
Cephalic							
93%							

Because of the increase in the number of abnormal positions and the high incidence of inefficient pains a prolongation of the labor may occur. Campbell reported 26 per cent with prolonged labor and 49 per cent with short labors in his cases. In our series 52.3 per cent of multipara had short labors, 43.4 per cent normal, and 4.3 per cent long (over sixteen hours). The longest multiparous labor was thirty-two hours. Of the primipara 33.3 per cent had short labors, 49 per cent normal, and 26.7 per cent long (over twenty-four hours), the longest being eighty-nine hours. The average durations of the stages of labor and the total duration for each group are

shown in Table VI and it is of interest to note that in this series both are well within the accepted normal limits.

TABLE VI.—AVERAGE DURATION OF LABOR

	First Stage	Second Stage	Third Stage	Total Duration
Primipara	20 h. 42 m.	1 h. 30 m.	14.4 m.	22 h. 26 m.
Multipara	7 h. 10 m.	28 m.	18.3 m.	7 h. 56 m.

Multiple small fibroids scattered throughout the uterine musculature may prevent firm contraction following the expulsion of the placenta and consequently postpartum hemorrhage must be guarded against.

The endometrium over large submucous fibroid nodules may be atrophic in character and unable to respond normally to the stimulus of pregnancy. If the placenta is attached in this area it may become partially adherent and manual removal may be necessary. Campbell¹ reported postpartum hemorrhage in 31.7 per cent of his eighty-two patients and adherent placenta in eight. In Watson's¹³ series postpartum hemorrhage occurred three times and adherent placenta twice in 157 cases.

The estimated blood loss at the time of delivery in our series was under 500 c.c. in each instance and over 300 c.c. in only eight, or 20 per cent. Atonicity of the uterus following delivery of the placenta occurred twenty-four times, but in all instances the bleeding was readily controlled by the use of oxytocic drugs. The placenta was adherent in two instances, necessitating removal in both cases. Low implantation of the placenta, as evidenced by rupture of the membrane at the border of the placenta, was noted six times; partial premature separation of the placenta four times and partial placenta previa twice.

Effect on the Puerperium

The outstanding complication of the puerperium is stated to be degeneration of the tumor caused by the decreased blood supply as the uterus contracts and involutes. Because of the diminished circulation the indiscriminate use of oxytocic drugs should be carefully weighed. If a uterine stimulant is indicated it would appear desirable that this be given in small and infrequent doses.

In Campbell's cases five myomectomies and three hysterectomies were done during the post-

partum period for degenerated tumors. In six of our patients temperature elevation associated with marked tumor tenderness was noted during the postpartum period, but all six recovered without surgical intervention. The average number of febrile days postpartum was 1.7, the longest being for fourteen days.

The average number of postpartum hospital days for all patients was 15.8, the longest being twenty-nine days in a patient who had been delivered by Porro cesarean section. This is a much shorter period of hospitalization than was reported by Eisaman.² In his series those who delivered spontaneously remained in the hospital 14.5 days, those with abdominal operations nineteen days and those with vaginal operations 26.3 days.

Involution of the fibroid uterus is definitely delayed. It was the opinion of the various examiners who discharged our patients that in 83 per cent there was subinvolution of the uterus in addition to the palpated fibroid. This delay of normal involution may be due partly to interference with the normal mechanism of involution caused by the presence of tumors in the uterine wall.

Mortality

The goal toward which every obstetrician strives is the reduction of both fetal and maternal mortality. Campbell reported a maternal mortality of 3.65 per cent in eighty-two cases of pregnancy complicated by fibroids, Mussey and Hardwick 2 per cent in ninety-seven cases, and Watson 3.2 per cent in 157 cases. In our series of fifty-three cases treated in a more conservative manner there were no maternal deaths.

Four babies delivered after the period of viability were lost. One died of aspiration pneumonia on the third day of life. The remaining three infants were stillborn, and in each instance the fetal heart was not heard when the patient reported to the hospital in labor. All three were found macerated at delivery. The longest of the four labors was twelve hours and all terminated spontaneously. The placenta in two of the cases was normal, but in the third several small infarcts were noted. The total fetal loss, including all the previable infants was sixteen, or 30 per cent. If the eight infants sacrificed by hysterectomy and the four abortions are subtracted from this, the fetal mortality for viable infants is reduced to 7.6 per cent.

Summary

Although fibroids may be a formidable complication of pregnancy the majority offer no difficulty if they are managed properly. Interference with the tumors during the antepartum period is rarely indicated and before any operative procedure is attempted careful evaluation of the whole problem is essential. During pregnancy the removal of a growth which may obstruct labor is rarely desirable, but if the operation is performed the operator should be fully aware of the risk he is assuming. In a series of cases reported by Troell¹² the maternal mortality was 0.9 per cent higher with myomectomy than with hysterectomy during early pregnancy. Naturally the mortality is less with the removal of pedunculated subserous tumors than of those imbedded in the uterine wall, but subserous tumors, unless very large, prolapsed into the pelvis, or with pedicle twists, rarely cause trouble.

Although expectant treatment will result in a marked reduction of operative deliveries, the obstetrician must be prepared to interfere during labor should the indication arise. Patients with large tumors low in the uterus may require abdominal delivery at term. Many times, however, the tumor rises out of the pelvis as the lower uterine segment develops and the delivery will terminate spontaneously. If a cesarean section is necessary the problem of what to do with the fibroids must also be considered. Huber and Hesseltine,⁴ presenting figures collected from the literature, found a maternal mortality of 15.4 per cent with cesarean section and myomectomy as compared with 3.4 per cent for cesarean section and hysterectomy. Of their own cases eight Porro operations were performed with no deaths while in two cesarean sections with myomectomy one death occurred. These figures emphasize the fact that the removal of tumors at the time of abdominal delivery is less safe than hysterectomy.

Although the tumors may undergo a degenerative change during the puerperium when their blood supply is suddenly reduced, our results with the conservative care of these cases suggest that the dangers of postpartum necrosis have been exaggerated. If operation becomes necessary the uterus should be removed in most instances. Huber and Hesseltine reported thirteen postpartum hysterectomies without mortality and ten myomectomies with one death.

As the incidence of operative deliveries increases the fetal mortality rate rises. With the development of a more conservative attitude in the management of pregnancy complicated by uterine fibroids more infant as well as maternal lives are being conserved. This factor alone justifies a less radical type of care.

Conclusions

1. Fifty-three cases of pregnancy complicated by uterine fibroids are presented.
2. Although a small percentage of patients with fibroids will require hysterectomy early in pregnancy the majority can be carried to term satisfactorily. Therapeutic abortion and myomectomy are rarely indicated.
3. Symptoms of degeneration in the fibroids do not always indicate the necessity for interference. 12.5 per cent of the patients in this series showed such symptoms but all were carried to term without operation and all were delivered of normal children.
4. The presence of fibroids requires more frequent operative delivery, but every effort should be made to avoid radical interference. The incidence of operative deliveries due to fibroids in this series was 22 per cent.
5. Conservative management of pregnancies complicated by fibroids will lead to a decrease in maternal and fetal risk. In this series there were no maternal deaths and the fetal mortality for viable infants only was 7.6 per cent.

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Varicose Veins

Allergic Reactions in Injection Treatment*

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■ THE method of obliterating varices by the injection of sclerosing solutions has grown in popularity and repute for more than a decade. At first these solutions were very unsatisfactory because of local irritation, severe cramps, indolent sloughs, etc. However, other agents without these disadvantages were soon introduced; such solutions are sodium morrhuate, sodium ricinoleate, and sodium monoethanolamine (monolate). These materials are soaps of either natural or synthetic cod liver oil, castor oil, and olive oil respectively. For the obliteration of varicose veins these solutions are effective, generally painless, and harmless, unless too much is deposited extravascularly, even in which case slough is quite rare. Sodium morrhuate produces the least untoward local reaction and is the safest of these four solutions to use, especially in the hands of the less-experienced operator. Deaths from embolic phenomena are most rare. Proper selection of cases and post-injection care have either entirely eliminated or greatly reduced the complications and hazards. However, in this paper we are reporting the occasional natural or acquired allergy to these solutions which we have encountered.

History

Allergy to sclerosing solutions has been reported extensively in the literature.¹⁻¹² Ritchie,⁹

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as far back as 1933, classified the types of allergic reactions to sclerosing solutions as (a) erythematous, (b) gastrointestinal and (c) circulatory. Zimmerman,¹² in 1934, reported seven cases of sensitivity to sodium morrhuate. In his series three patients developed reactions following the initial injection. In the remaining four cases the allergy manifested itself only after the injections had been resumed following a rest period of several weeks or more. He advised intradermal skin-testing to determine sensitivity to preclude the danger of a severe anaphylactic response in the later type of case. In 1935, Praver and Becker⁸ observed "untoward reactions in the form of a cutaneous eruption or a nitritoid crisis in seven out of 176 patients who received 783 injections of 5 per cent sodium morrhuate . . . for the . . . obliteration of varicose veins." Lewis,⁶ in 1936, also reported a very severe reaction from sodium morrhuate in a patient who had completed a series of injections and had just returned to clear up a few recurrent varicoses. He reiterated that the greatest care should be exercised in "patients who had previously used the same solution if a sufficient time had elapsed to allow the development of a foreign protein sensitiveness." Dale,¹ in 1937, on the other hand, reported a severe nitritoid reaction following the thirteenth in a series of injections spaced at regular intervals. Moreover, Hatcher and Long,² mention a case in which reactions occurred only after the first injection of two separate series of treatments and none on successive injections. Traub and Swartz¹¹ and McCastor and McCastor,⁷ in the same year, reported severe anaphylactoid reactions to sodium morrhuate. Levi,⁵ in 1938, called attention to the fact that deaths have followed the use of the same substance. Shelley,¹⁰ in 1939, described a fatality following the use of monoethanolamine oleate (monolate). He also suggested that death following the use of sodium morrhuate is not as uncommon as the medical literature would indicate. He mentioned the fact that one physician from the Medical Examiner's Office in New York City stated that he had seen three such deaths in the course of his duties, none of which have been mentioned in the medical literature. This experience has not been noted locally. Holland³ and Kadin⁴ have recently added to the reports of severe anaphylactoid reactions to that sclerosing agent.

Agents and Technique

Sodium morrhuate has been accepted as the solution of choice in this clinic and it has been used very extensively for the obliteration of

by the preceding injection. Treatments were generally given at weekly intervals. The patient was discharged when all the varicosities were obliterated. In a number of patients, where recur-

TABLE I.

Annual Incidence of Allergic Reactions to Intravenous Sodium Morrhuate for the Obliteration of Varicose Veins

Year	No. of Reactions	No. of Pts. Treated*	Incidence of Reactions to No. of Pts. Treated	Sodium Morrhuate Total No. of Injections	Incidence of Reactions to Total No. of Injections
1930	0	25	0	450	0
1931	0	83	0	1,087	0
1932	0	134	0	1,327	0
1933	0	119	0	1,201	0
1934	0	125	0	1,114	0
1935	3	86	3.49%	1,168	0.275%
1936	3	82	3.66%	1,030	0.291%
1937	1	81	1.23%	954	0.148%
1938	2	96	2.08%	1,052	0.190%
1939	6	85	7.06%	886	0.677%
1940	1	22	4.54%	241	0.415%
Total	16	938	1.706%	10,510	0.152%

*New admissions.

varicosities. In a small number of cases, where an incompatibility was found or experience indicated, sodium ricinoleate was used. Since 1930, using sodium morrhuate for the most part, we have treated 938 cases and have given 10,510 injections (Table I). The size of the usual dose varied from 0.5 c.c. of a 5 per cent solution up to 2.0 c.c. of a 10 per cent solution. The number of true reactions encountered were sixteen, giving an incidence of 1.706 per cent of the number of cases treated, and 0.152 per cent of the number of injections given.

In the selection of cases for injection of varicosities of the lower extremities, the usual safeguards in the history, and both local and general examinations were made. Special emphasis was placed on the integrity of the deep venous circulation. If there was no history of allergy, 0.5 c.c. of a 5 per cent sodium morrhuate solution was then injected intravenously into the lowest varix. On subsequent visits the amount was gradually increased up to 2.0 c.c., the increase depending upon the degree of thrombosis caused

rences of some varicosities were present, treatment was resumed with the original 0.5 c.c. of 5 per cent sodium morrhuate solution.

Reactions

Seven reactions followed the resumption of treatment, three occurring between the second and fourth injections. Two reactions followed the initial injection of sodium morrhuate; and one person first experienced allergic symptoms only after the twenty-third injection. In two instances, reactions occurred on the second and fourth injections of the first series respectively, and occurred in three cases on the second to fourth injection upon the resumption of treatment instituted to clear up a few recurrent varicosities. In the nine remaining cases the reactions followed only after a successive number of injections given at regularly-spaced intervals (Table II).

In most instances of sodium morrhuate sensitivity, an attempt to complete the obliteration of the varicose veins by sodium ricinoleate was

made. In two such cases, the patients also developed an allergy to the sodium ricinoleate on the second and fourth injection respectively (Table III). In the majority of the fourteen remain-

of patients treated) (Table IV). In addition our incidence of reactions to the total number of injections was 0.152 per cent compared to 0.894 reported by the same authors.

TABLE II.

Time Relationship of Allergic Reaction to Number of Injections Received

Serial No. of Injection	First Series of Injections			Résumé of Course of Treatment		
	First Injection	2nd—4th Injection	5th Plus Injection	First Injection	2nd—4th Injection	5th Plus Injection
No. of Reactions	2	2	5	0	3	4
Incidence	12.50%	12.50%	31.25%	0	18.75%	25.00%

TABLE III.

Atopic Features of Allergic Responses to Sodium Morrhuate

Criteria	Positive	Negative	Percentage Positive
Skin Tests (Intradermal)	2	14	12.50%
Subsequent Allergy to Sodium Ricinoleate	2	14	12.50%
Concomitant Allergy to Other Substances	1	15	6.25%

ing cases that exhibited an allergy to sodium morrhuate, treatment with sodium ricinoleate was successful for the obliteration of the varicose veins. Skin tests for suspected allergy were of little or no assistance in preventing reactions. Only two persons, suffering clinical allergy to sodium morrhuate, gave positive skin reactions upon intradermal testing. The other individuals gave negative results. Only one person in this group had another form of allergy, ragweed hay-fever. The allergy as with other allergies was specific, i. e., was not experienced when a shift from morrhuate to ricinoleate was made, even though two patients who were sensitive to sodium morrhuate later developed a sensitivity to sodium ricinoleate.

Our experience with allergic reactions (1.706 per cent of patients treated) compared favorably with the number encountered by Praver and Becker³ who reported seven untoward reactions in 176 patients who had received 783 injections of 5 per cent sodium morrhuate (3.97 per cent

Types of Reactions

The severity of allergic reactions ranged all the way from a localized urticaria at the site of the injection to coma and circulatory collapse. Allergic reactions to the sclerosing solutions could be classified as: (a) cutaneous, (b) respiratory, (c) cerebral, (d) gastro-intestinal and (e) severe anaphylaxis (Table V). A combination of the types was usually the rule. The cutaneous type of reaction was the most common of all the manifestations. It was manifested by either local or generalized pruritus, erythema and urticaria. It was also the easiest to control, responding to small injection of epinephrine, 1:1000, or ephedrine sulphate by mouth. Cutaneous reactions were noted in twelve persons. A case report illustrating this type of reaction was that of Case 15:

Mrs. E. G., aged twenty-one, came to the clinic complaining of bilateral varicosities of one year's duration. Due to the large size of the varicosities a saphenous ligation was advised. On June 1, 1939, 0.1 c.c. of a 5 per cent solution of sodium morrhuate was injected in a varix as a test dose for sensitivity. The next day the patient noted a mild pruritus at the site of the injection. This disappeared in a short while. On June 3, 1939, 2.5 c.c. of a 5 per cent solution of sodium morrhuate was injected into the distal segment of the left saphenous vein at the time of a saphenous-femoral ligation. Pruritus over the entire course of the injected vein was immediate. In five minutes giant urticarial wheals involving the entire left thigh and leg was noted. The patient was given 10 minims (0.6 c.c.) of epinephrine, 1:1000, intramuscularly and ephedrine sulphate, gr. $\frac{3}{8}$, orally. The urticarial reaction gradually subsided. However, the pruritus remained for two days. Intradermal skin tests performed at a later date were strongly positive for sodium morrhuate.

JOUR. M.S.M.S.

The respiratory type of reaction was generally manifested by asthmatic wheezing and coughing. In our group of cases it always accompanied anaphylactic shock. Five persons suffered

action, the patient suffered from abdominal cramps, nausea, diarrhea and an occasional emesis. Three persons manifested gastro-intestinal allergy. Two persons in this series showed

TABLE IV.

Incidence of Allergic Reactions to Sodium Morrhuate

Reference	No. of Reactions	No. of Pts. Treated	Incidence of Reactions to No. of Pts. Treated	Total No. of Injections	Incidence of Reactions to Total No. of Injections
North End Clinic	16	938	1.706%	10,510	0.152%
Praver and Becker ⁸	7	176	3.977%	783	0.894%

TABLE V.

Incidence of Type of Allergic Response to Sodium Morrhuate

No. of Reactions	Dermatological Allergy	Respiratory Allergy	Cerebral Allergy	Gastro-intestinal Allergy	Allergic Shock
16	12	5	2	3	4
Incidence	75.0%	31.25%	12.50%	18.75%	25.00%

from respiratory symptoms. Case 2 illustrates this type of reaction:

Mrs. J. G., aged forty-five, gave a history of extensive varicose veins of both legs for fourteen years. The varicosities were so large and extensive that a bilateral ligation at the saphenous-femoral junction was advised, and on June 6, 1936, that operation was performed. The remaining patent varicosities were treated by injections of sodium morrhuate. Even though she had received fourteen weekly injections of 5 per cent sodium morrhuate in doses varying from 0.5 to 2.0 c.c., the fifteenth injection on October 22, 1936, elicited immediate complaints of dizziness, difficulty in breathing and a tightness in the chest. There was spasmodic coughing and some expectoration. On examination, diffuse râles were heard over the entire chest, and the breath sounds were indistinct. The radial pulse was slow and poor in quality. The patient was given 10 minims (0.6 c.c.) of epinephrine, 1:1000, intramuscularly. In twenty minutes the chest complaints were less marked. The injection of epinephrine was repeated. Recovery proceeded rapidly, the dizziness and pulmonary edema gradually disappearing with complete recovery within a relatively short time. An intradermal skin test performed two weeks later was very positive.

In the ordinary gastro-intestinal type of re-

sponses which designated cerebral involvement.

The most severe of all allergic reactions was anaphylactic shock with resultant coma, collapse, loss of pulse, and in some cases convulsions and shock. Anaphylactic shock may, or may not, be preceded by cutaneous, respiratory, cerebral, or gastro-intestinal reactions. A gastro-intestinal type of reaction preceded the anaphylactic shock in Case 5.

Mrs. R. G., aged fifty-two, gave a negative history of allergy, but a positive history of diabetes mellitus. Chief complaint was of marked varicose veins, present for twenty years. During the period from November 14, 1930, to July 3, 1932, the patient received a number of injections of 20 per cent saline-glucose solution with moderate success. She returned on April 21, 1933, and was given weekly injections of 1-2 c.c. of 5 per cent sodium morrhuate. Returned a second time on March 14, 1935, for weekly injections of the same sclerosing agent. On April 4, 1935, she received 1.5 c.c. of 5 per cent sodium morrhuate. About seven minutes later, the patient felt dizzy and warm, complained of generalized weakness, a sinking sensation in the abdomen, nausea and upper epigastric pain. After a few minutes she collapsed and was given 10 minims

TABLE VII.—SUMMARY OF CLINICAL DATA

No.	Name Age Sex	Site of Varicosities	Date 1st Treatment	Frequency of Rx's.	Amount Injected	Date of Reaction	Shocking Dose	Symptoms	Results Thrombosis	Remarks
1	A.M. 40 F	Left leg 1 yr.	3-28-35	Third weekly injection	1½ c.c. 5%*	4-11-35	1½ c.c. 5%*	Developed urticaria 4-12-35	Fair	Marked swelling and pain. Periphrlebitis.
2	J.G. 45 F	Bilateral legs—14 yrs.	3-12-36	q. 1 wk.	2 c.c. 5%	10-22-36	2 c.c. 5%	Immediate urticaria, dyspnea, syncope, pulmonary edema.	None	Intra-dermal test very positive.
3	L.S. 39 F	Bilateral legs—10 yrs.	7-1-37	q. 1 wk.	½ 2 c.c. 5%	4-6-39	2 c.c. 5%	Immediate pruritus, urticaria, cramps, collapse, vomiting.	Fair	Urticarial reaction 3-16-39. Present reaction required hospitalization.
4	M.C. 42 F	Bilateral thighs—6 yrs.	5-7-36	q. 1 wk.	½ 1 c.c. 2% sodium ricinoleate	3-2-39	1 c.c. 2% sodium ricinoleate	Urticaria followed by marked hoarseness and pain in throat.	None	Reaction after resection and sodium morrhuate 6-2-38. Also 12-1-38.
5	R.G. 52 F	Bilateral legs—20 yrs.	11-14-30	q. 1 wk.	2 c.c. 5%	4-11-35	1½ c.c. 5%	Immediate, gastric pain, nausea, comatose, marked shock.	Fair	Very severe reaction. Occurred on 2nd injection after resump- tion of treatment.
6	R.D. 47 F	Bilateral legs—15 yrs.	10-28-37	q. 1 wk.	1 2 c.c. 5%	3-10-38	1½ c.c. 5%	After ten minutes, syncope, hypotension, erythema, dyspnea.	Fair	Psychogenic factor strong. Tests negative.
7	S.K. 54 F	Bilateral legs—7 yrs.	3-27-31	q. 1 wk.	2 c.c. 5%	9-24-36	2 c.c. 5%	On return home eyes swollen, pruritus, generalized urticaria.	Poor	Relieved by epinephrine. Occurred on 2nd injection after resump- tion of treatment.
8	S.S. 54 F	Right leg 8 yrs.	2-29-40	Fifth weekly injection	½ c.c. 5%	3-28-40	1 c.c. 5%	Immediate erythema, dyspnoea, felt faint, asthmatic wheezing.	Poor	Relieved immediately by epinephrine 1:1000.
9	I.L. 43 F	Bilateral legs—17 yrs.	7-1-37	q. 1 wk.	2 c.c. 5%	10-28-37	2 c.c. 5%	Immediate headache, erythema, generalized urticaria, pruritus.	Poor	No future reactions with sodium ricinoleate.
10	M.N. 40 F	Bilateral 10 yrs. ulcer left leg	7-19-34	q. 1 wk.	2 c.c. 5%	10-29-36	1½ c.c. 5%	Upon injection collapse, tachycardia, Jacksonian type of convulsions.	Good	Recovery in two hours. Glycosuria 4+ after reaction. Previously negative.
11	J.B. 51 M	Bilateral legs—2 yrs.	12-10-36	q. 1 wk.	2 c.c. 5%	12-24-38	2 c.c. 5%	Fifteen minutes later urticaria, dyspnea, and pulmonary edema.	Excellent	Relieved by epinephrine. Occurred on fourth injection after resump- tion of treatment.

	H.B. 33 F	T.D. 53 F	S.W. 43 F	E.G. 21 F	T.S. 51 F
12	Bilateral legs—5 yrs.	Bilateral legs—6 yrs.	Bilateral legs—15 yrs.	Bilateral legs and thighs 1 yr.	Bilateral legs—5 yrs.
	7-11-35	8-5-37	2-16-39	6-1-39	10-19-39
	First injection	q. 1 wk.	Fourth weekly injection	First injection	q. 1 wk.
	½ c.c. 5%	2 c.c. 2% sodium ricinoleate	½ c.c. 5%	0.1 c.c. 5%	½ c.c. 5%
	7-11-35	3-30-39	3-9-39	6-1-39	12-7-39
	½ c.c. 5%	2 c.c. 2% sodium ricinoleate	½ c.c. 5%	0.1 c.c. 5%	½ c.c. 5%
	Immediate wheezing generalized urticaria, marked leg swelling.	Marked pruritus with demographia. Few urticarial patches.	Severe urticarial response localized at site of injection.	Urticaria and pruritus along course of vein.	Marked pruritus. Pallor. Transient urticaria. Felt faint.
	Fair	Excellent	Fair	Good	Poor
	Skin tests positive. True allergic reaction on first injection.	Previous reaction to sodium morrhuate. Eighth injection of ricinoleate.	Patient allergic to ragweed. Re- action localized in nature.	Skin test positive. Relieved by epinephrine 1:1000.	Symptoms transient. No epinephrine given.

*Sclerosing material sodium morrhuate unless otherwise specified.

(0.6 c.c.) of epinephrine, 1:1000. Five minutes later the patient became drowsy and semicomatose, followed by twitching movements of the mouth. The left portion of the face became flaccid. The entire chest was filled with diffuse râles. Thirty-five minutes after the onset of symptoms, the blood pressure reading was

TABLE VI.

Influence of Sex on Incidence of Allergy to Sodium Morrhuate

Sex	No. of Pts. Treated	No. of Reactions	Incidence of Reactions
Male	275	1	0.363%
Female	663	15	2.262%
Total	938	16	1.706%

50/?. The radial pulse was of poor thready quality. The injection of epinephrine was repeated. Ten minutes later the patient became semiconscious with poor orientation. The blood pressure reading was 82/46. The injection of epinephrine was repeated 25 minutes later. The blood pressure rose to 98/70. The patient was then given 20 c.c. of a 50 per cent solution of glucose with 5 units of insulin intravenously. Approximately 90 minutes after the onset of the symptoms the patient regained full consciousness with a blood pressure reading of 114/68. The pulse, however, was still weak and irregular, with no alleviation of the epigastric pain. The patient's condition rendered hospitalization for two days advisable.

Sex appeared to be a factor in our series. The ratio of females to males in our series averaged 2.41 to 1, there being 663 women and 275 men. Only one of the men treated suffered a reaction, an incident of 0.363 per cent; while 15 women of 663 treated, an incidence of 2.262 per cent had reactions (Table VI). Thus women were 6.2 times as allergic as the men.

Conclusion

The usual allergic reaction does not often put the patient's life in jeopardy. Among the sixteen reactors, there was one instance of anaphylactic shock, while three other patients suffered syncope. The underlying mechanism of the production of allergy to sodium morrhuate is not clear. It bears a marked similarity to the production of serum sickness, since only two of the sixteen reactors suffered from an allergic reaction following the first administration of the antigenic substance. The other fourteen cases were instances of acquired allergy, occurring as far along in the course of treatment as the

twenty-third injection. Moreover only two of the reactors gave positive skin reactions to the allergen, and then only after they had suffered reactions. Whether the allergy is due to a protein fraction of the sclerosing substance or to the formation of a hapten is unimportant. The danger of a reaction is always present and generally unpredictable, and, therefore, the more distressing to both physician and patient. Any symptoms referable to allergy should be sufficient indication and warning to discontinue treatment with that particular sclerosing agent.

The treatment of the mild reactions is purely symptomatic; small doses of epinephrine shorten the episode as well as relieve the symptoms; ephedrine by mouth can be helpful. The severe reactions are acute medical emergencies; here again epinephrine is the most valuable agent, and should rapidly be used in full therapeutic doses; ephedrine and similar drugs should not be employed here. No other chemicals are of any significant assistance. Supportive measures should of course be employed; external heat and intravenous glucose seem to be of distinct help. No attempt at desensitization was attempted in any of our cases; we preferred to switch safely to another thrombosing solution.

Summary

1. Nine hundred thirty-eight patients suffering from varicose veins of the lower extremities were given 10,510 injections of sodium morrhuate from 1930 to 1940. Sixteen allergic reactions to that substance occurred.

2. Two reactions followed the initial injection of the sodium morrhuate; two occurred on the second to the fourth injection; five occurred after the fifth injection; three occurred on the second to fourth injections following the resumption of treatment, and four after the fifth injection following the resumption of treatment.

3. Skin tests were positive in only two cases; two reactors subsequently gave reactions to sodium ricinoleate; and one person also had hay-fever.

4. Our incidence of reactions compared most favorably with the incidence reported elsewhere.

5. Allergy to sodium morrhuate presented itself symptomatically as (a) dermatological, (b) respiratory, (c) cerebral, (d) gastro-intestinal, and (e) anaphylactic shock.

6. Sex appeared to be a factor in our series

of cases. Women were markedly more susceptible to reactions than men.

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MSMS

A Method for Correction of Angulation in Fractures of Long Bones

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■ The general practitioner frequently encounters some difficulty in correcting angulation deformities following fractures of long bones. We wish to emphasize a method well known to orthopedic surgeons; namely, cast wedging. We believe that an accurate correction is possible by simple means.

After a fracture is reduced, checkup x-ray films should be taken to determine if proper alignment of fragments has been obtained. The radiologist should determine, by means of a protractor, any angulation present in one or both planes, and state the degree and direction of angulation in his report to the physician. This done, correction of any existing angulation then

is made possible by a number of methods. We have suggested two methods and in twenty cases where they have been utilized excellent results have been obtained.

to non-communited fractures unless pin traction is employed.

Method II

A second method is to draw lines on the cast showing the degree of angulation as seen on the x-ray film. The cast is then cut circularly at the site of fracture and the lower fragments bent until the previously drawn angulated line becomes a straight line. If the angulation is in two planes the same procedure may be repeated for the other plane of angulation. If angulation is only in one plane it is well to draw a straight line in the other plane so that during correction one does not make a new angulation in this second plane. This will not occur if care is taken to keep the latter line perfectly straight. The method is particularly useful where pin traction is employed.

MSMS

Severe Fractures of the Ankle Joint

Conservative Management and a Presentation of Typical Cases

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Method I

A wedge of cardboard or thin lead is cut to correspond exactly to the degree of angulation measured from the film of the bones involved in the fracture. The cast is then cut circularly at the fracture site three-fourths of its circumference and the distal portion of the cast with its encased soft tissues and bones is moved in the proper direction so that the cardboard wedge fits snugly into the widened circular cut. An assistant then holds the extremity in the new position, or the position is maintained by the use of a Hawley table. New plaster is applied over the site of the inserted wedge and the extremity held in position until drying is complete. If angulation is present in two planes, another circular cut immediately above or below the previous cut in the cast is made and the proper wedge is inserted at right angles to the first wedge and the above procedure repeated. We have had no ill effects due to soft tissue swelling at the fracture site. This method, of course, is only applicable

It is well known that fractures of the ankle may at times offer very difficult problems. The end results have often been a permanent disability in the patient and a sad disappointment to the physician. Mutilation of the bones and soft tissues about the ankle, produced by direct violence, represent the worst injuries. Fortunately, such occurrences are infrequent, but when they are seen, one has to make the best of a bad situation.

The many types of ankle injuries are well described in most of the modern textbooks^{8,10} and Ashhurst and Bromer¹ gave a complete classification of ankle fractures based on the application of the force which may produce them. In a recent publication, Carothers⁴ has suggested a

classification that is rather simple and based on injuries of the ankle joint with or without displacement of the astragalus.

The most serious fracture of the angle produced by indirect violence is the one in which both internal and external malleoli are separated and displaced together with the fracture and displacement of a portion of the lower, posterior articulating surface of the tibia. Henderson and Stuck⁹ in 1935 called it a "trimalleolar fracture," which is a convenient descriptive term but not anatomically correct, since the lower, posterior joint lip of the tibia is not a true malleolus. Although this injury of the ankle was described by Sir Astley Cooper in 1832, Cotton^{5,6,7} in 1915 stimulated new interest and pointed out the serious consequences that arise if the posterior dislocation was not recognized and reduced. This new interest has been manifested to a large extent in attempts to properly treat this injury so that the best results may be obtained.

There are those who believe an open reduction and internal fixation of the posterior tibial fragment is the best means of maintaining a satisfactory alignment of the fracture. Lounsberry and Metz^{3,11,12} first suggested this method, which is now used almost routinely by some, particularly when the posterior tibial fragment involves one-third or more of the lower articulating surface. On the other hand there are those who have had equal success with combined manipulation and traction methods and Bohler² contends that open reduction is never indicated. However, it is obvious that the object in both methods is to anatomically reduce and maintain the alignment of the posterior tibial fragment, which is the factor that gives the most trouble and makes the fracture a mean one to deal with. The literature during the past few years contains a variety of discussions on the management of this injury. To study the methods of treatment gives one the impression that some seem too radical and others too conservative. To attempt to achieve success in the treatment of a trimalleolar fracture simply by manipulation and application of a plaster cast, one certainly has to be an optimist. On the other hand, the routine use of open reduction and fixation in treating every case, makes one appear to be a pessimist. Therefore, it seems that if a standard or routine method would be used, it is better to take the middle ground. I have found the use of manipulation with traction to

be quite adequate in the meanest trimalleolar fractures of the ankle and the results obtained have been gratifying.

In the treatment of fractures of the ankle the mechanism of the force producing the fracture should be taken into account as this knowledge facilitates the reduction. Indirect force on the plantar flexed foot, or sometimes a combination of extreme plantar flexion, abduction and external rotation, is responsible for a trimalleolar fracture. The astragalus is driven against the lower, posterior, articulating margin of the tibia resulting in a fractured fragment at this point of the tibia. Continuation of the force on the unrestrained foot causes a severe tug on the deltoid and lateral ligaments which produces the fractures of the medial and lateral malleoli and a posterior dislocation of the astragalus. If the fracturing force is directed more directly against the lower end of the tibia, then a comminuted or T-fracture may occur associated with injury to the tibiofibular ligament. Rupture of the ligament between the lower end of the tibia and fibula widens the space between the bones at this point and the astragalus dislocates laterally. A force directed anteriorly against the lower, articulating surface of the tibia may produce a fractured fragment of the anterior margin with forward dislocation of the astragalus; however, such injury is very uncommon. Therefore, in reduction it is necessary to use manipulation that opposes the forces that produced the injury.

Even in trimalleolar fractures with dislocation of the astragalus, it is possible to have different degrees of injury. A "classical" fracture is the worst in that the tibial fragment usually comprises one-third or more of the articulating surface, whereas a "minimal" fracture consists of a much smaller tibial fragment. This distinction in the size of the tibial fragment has been a deciding factor in the treatment, indicating open reduction in the classical type and more conservative methods for the minimal fracture.

No attempt is made to suggest any new method of treating fractures of the ankle or to detract from various treatments that are now in use and giving good results. The purpose is simply to demonstrate, by these cases, the results obtained by the use of manipulative reduction and maintenance with the aid of steel pins used in traction and incorporated in a plaster cast. I believe the method to be safe, simple and quite

satisfactory in the treatment of some of the worst fractures of the ankle.

Technique

Early reduction is always advisable, unless, of course, other more severe injuries demand first attention. Soft tissue swelling, pain and some

widened by injury to the tibiofibular ligament. Internal rotation of the foot usually aligns the lower end of the fibula and adduction returns the medial malleolus of the tibia to its normal position as well as to approximate the lacerated fibers of the deltoid ligament. Radiographic studies should then reveal the astragalus fitting snugly

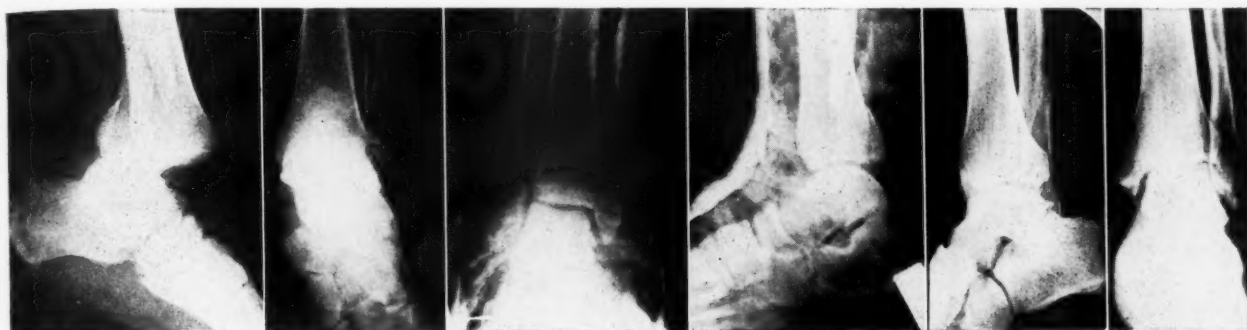


Fig. 1. Case 1.

degree of shock are minimized by early treatment. The patient lying on his back, the foot and leg are surgically prepared. Novocain is infiltrated into the skin over the os calcis and upper portion of the tibia medially and laterally. Infiltration may then be made into the hematoma within the ankle joint and shortly pain is entirely relieved. A steel pin is placed through the upper, posterior portion of the os calcis and another through the tibia just below the tubercle. To retract the skin toward the knee before inserting the upper pin will avoid tension against the skin at the pin holes. The foot and leg is gently supported as it is placed in a traction apparatus and the pins locked in place. Support is continued until sufficient traction is made to reduce the astragalus. The foot and leg is then elevated until the knee is flexed from forty-five to seventy degrees from complete extension and thereby the gastrocnemius muscle is well relaxed. The foot may then be moved without restraint. Digital pressure over the tibial fragment and movement of the foot to relax the tendons over it will disengage the fragment and contribute to the ease of its replacement. The foot then is slightly dorsi-flexed for a posterior tibial fragment or plantar-flexed for an anterior fragment, causing tendon pressure over the fragment to aid in holding it in place. Bilateral pressure with the palms of the hands or a padded Forrester clamp will restore normal relation of the tibia and fibula if the space between them has been

in the mortise formed by tibia and fibula and the posterior or anterior tibial fragment must restore a smooth articulating surface. Plaster is then applied following a light padding over the upper portion of the fibula, the patella, the ankle medially and laterally, the Achilles tendon, the plantar surface of the foot and the heel. The steel pins are incorporated in the plaster which is wound from the toes to the middle of the thigh. The foot, leg and knee are encased in whatever position they may be when the satisfactory reduction has been obtained, as any change to a neutral position may result in the loss of the anatomical alignment. Shortly, when the plaster has set, the leg is removed from the traction apparatus and the patient sent to his room. The foot and leg is elevated rather high on pillows to allow recession of the swelling of the soft tissues. A window cut in the cast over the anterior portion of the ankle and knee adds to the patient's comfort. Of course, close observation of the circulation in the extremity is watched for at least forty-eight to seventy-two hours, as a circular cast always carries the danger of being too tight. Hospitalization after reduction usually affords more convenience to the physician; however, it is not imperative and the patient may convalesce at his home if he so desires. The cast should not be removed for five or six weeks. After this time a lighter, skin cast with a walking iron should be applied with the foot in a neutral position and the knee only slightly flexed. The walk-

FRACTURES OF ANKLE JOINT—LAVENDER

ing cast may be used for another five or six weeks, after which weight bearing on the ankle is allowed. A leather ankle brace or a high top

der spinal anesthesia, the fracture was manipulated to disengage the fractured fragments and then reduction by traction and molding of the ankle was carried out. A good result was obtained in this case. (See Fig. 3.)



Fig. 2. Case 2.

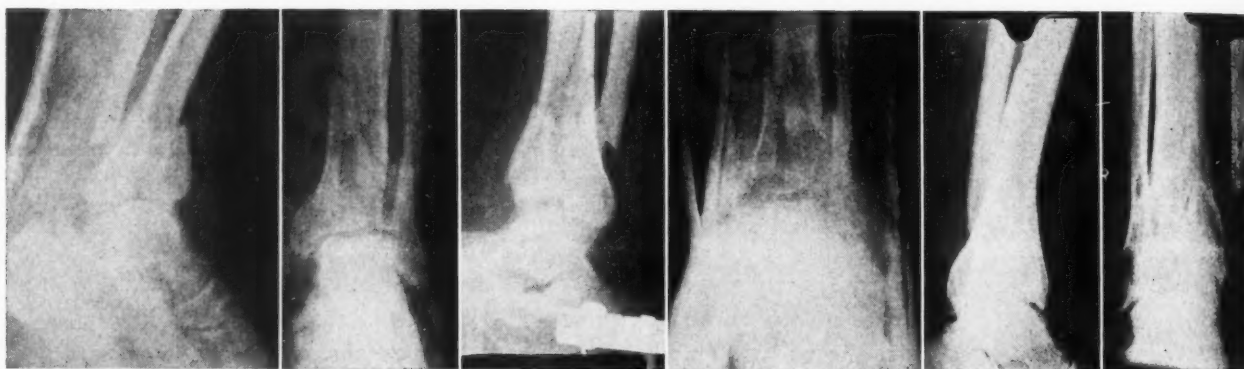


Fig. 3. Case 3.

shoe with an arch support is desirable for two or three months.

Case 1. J.V.W., male, age 22, case number 34721. Trimalleolar fracture of the right ankle produced by sliding into a base during a game of baseball. Immediate reduction and final result good. (See Fig. 1.)

Case 2. M.G., male, age 45, case number 59283. Trimalleolar fracture of the right angle. The patient slipped on a wet tile floor. The foot was plantar flexed and externally rotated as he sat forcefully on the foot in the fall to the floor. Immediate reduction and a good result. (See Fig. 2.)

Case 3. R.K., male, age 28, case number 43131. Severely comminuted fracture of the right ankle. The patient was in an automobile accident. The patient was riding in the rear seat with his foot braced against a foot rest. The astragalus was apparently driven directly against the lower, articulating surface of the tibia. The skin remained unbroken. The patient was brought in for treatment ten days after the injury, following which there had been no attempt to reduce the fracture. Un-

Conclusion

The most severe fractures of the ankle may be treated with satisfactory results by combined manipulation and traction in which alignment of the fractured fragments is maintained by incorporation of the traction pins in an adequate plaster cast.

No ill effects have been observed by keeping the knee flexed or the foot out of neutral position during the first few weeks of treatment.

Satisfactory reduction is possible and may be maintained without the use of a third traction pin through the metatarsals for a forward pull on the foot. Traction in the long axis of the leg with variation in the position of the foot seems to accomplish in ankle fractures what a metatarsal traction wire may offer.

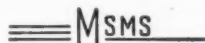
Local anesthesia in many fresh fractures of the ankle affords complete freedom from pain

and a great advantage in its use is that the co-operation of the patient may be had during the process of reduction. The consciousness of the patient is very helpful in that his comfort is better assured as the cast is applied and immediately following the procedure. Seldom is it necessary to make alterations later if the patient leaves the operating room conscious and comfortable.

No ill effects have been observed by allowing weight bearing on the injured ankle at the end of three months following the use of a walking cast.

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WAYNE SPEECH CLINIC ADDS NEW EQUIPMENT

Wayne University's speech-correction clinic will be equipped this year with one of the newest instruments known in its field: a new type of electro-kymograph, for measuring and recording breathing patterns.

The device, the only one of its kind in Detroit, was donated to the university last year by Beta Sigma Phi Fellowship, a social-scientific group of persons holding graduate degrees from Wayne.

The speech-correction clinic, located at 4735 Cass, near Hancock, offers a special class for adult stutterers, which meets Mondays and Thursdays at 7:00 p.m. There is also a children's clinic, for help in every type of speech difficulty, on Saturdays at 9:00 a.m. The class for adults is available without credit at the usual university class fee; the children's program, similar to that in which 60 youngsters were treated regularly last year, is available at nominal fees. The work is directed by Prof. Eugene Hahn, authority on the treatment of speech difficulties.

The clinic offers academic laboratory experience to Wayne students training to be teachers of speech correction, and also functions in improving the speech of the university students themselves.

The Wayne program functions in coöperation with the speech correction program in the Detroit public schools, which is supervised by Miss Hildred Gross. Most of the cases in the schools are cared for in the 150 centers maintained by the Board of Education in various school buildings.

OCTOBER, 1941

Hypothyroidism in Children

A Review of Masked Symptoms and Evaluation of Response to Thyroid Treatment

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■ CONSIDERABLE literature has accumulated on hypothyroidism in general but it seems that a scarcity exists in pediatric writings, especially concerning mild or borderline types, and it is in some measure the reason for this report on a number of interesting observations made upon forty-one patients between the ages of nine months and fourteen years.

Among the recent authors interested in the subject are: Shelton;^{7,8} Topper;¹⁰ Cattell;⁸ Dorff;⁴ Brown and associates;¹ Wilkins;¹² Watkins;¹¹ and Rose.⁶

Dorff⁴ appears to have coined the term "masked hypothyroidism" as a description for his cases "since the symptoms are misleading and often go unrecognized unless properly studied and interpreted."

Rose⁶ wrote that "the term 'paradoxical hypothyroidism' is applicable to a group of patients in whom thyroid deficiency produces an almost complete reversal of the classic picture. They are nervous and irritable, undernourished and sometimes complain of palpitation and tachycardia . . . their only characteristic symptoms are apt to be fatigability and intolerance to cold, yet they respond promptly as a rule to desiccated thyroid."

We are reporting observations made upon a group of patients who show disturbances which may well be metabolic disorders closely related to hypothyroidism. Because of the lack of a better explanation of the etiology, as well as evidence of satisfactory response to thyroid substance in the majority of cases, we believe the diagnosis of "masked hypothyroidism" can be applied to most of this group.

Because retardation in carpal bone development and a low basal metabolic rate are agreed upon by most writers on the subject as laboratory evidence of hypothyroidism, we have used these criteria as aids in classifying our cases. All of the children have had either one or both examinations included in their case studies. The examination of x-rays of the bones as well as a complete physical examination seems sufficient to rule out other causes of bony retardation as mentioned by Dorff,⁴ i.e., "rickets, mongolism, celiac disease, congenital syphilis, et cetera." It is also felt that other causes for hypometabolic states discussed by Watkins¹¹ can be ruled out.

Among the total number (forty-one) of children, twenty-seven were male; fourteen were female. A definite family history of thyroid disturbances was obtained in twelve cases. There were four families in which two siblings showed similar symptoms. Twenty-eight of the children were of school age.

Of the twenty-five children who had x-ray examinations for carpal development, twenty-two showed definite delay in osseous growth of more than six months when compared to the standards published by Wingate Todd.⁹ Three children showed development considered normal or with less than six months' retardation. One patient in the latter group had a metabolic rate of minus twenty-six. The other two patients in addition to having symptoms and findings similar to the group described below, gave a history of their mothers having low metabolism rates and both were taking thyroid medication while we were making these observations upon their offsprings. It may be supposed that if our diagnosis is correct, the onset of hypothyroid symptoms has been so recent that no delay was demonstrable at present.

Of the seventeen patients who were considered old enough for satisfactory basal metabolism tests, fifteen showed low readings ranging from minus seventeen to minus thirty-six. The other two children were found to have a minus two and a minus nine rate respectively.

A review of the histories showed that the most prevalent complaint was frequent upper respiratory infection. Twenty-two are in this group. Most of the children had been on the usual vitamin mixtures and iron tonics. Many had had so-called "cold vaccines" and ultraviolet light treatments. About half of these children had already

been subjected to removal of tonsil and adenoid tissue without any relief from recurrent upper respiratory bouts. The parents of the remaining number wanted advice on tonsillectomy, and it was for this reason that we were asked to see the patients.

An interesting group of findings in the nose were either observed at the time of examination or symptoms originating in the nose were complained of by the parents or children in seventeen cases. So far as we know, a similar reference to these findings does not appear in pediatric literature, although certain internists and otolaryngologists have described mucous membrane pathology in hypometabolic states. Lee,⁵ in 1925, wrote of the relationship of vasomotor rhinitis and hypothyroidism. More recently, in 1936, Bryant² called attention to the tendency in metabolic disturbances of infections such as repeated colds, and made a plea for consideration of hypothyroidism in cases which did not respond to ordinary therapeutic efforts. The membranes of the turbinates viewed from the anterior nares, showed a pale, waxy, boggy appearance unless there was a superimposed infection, in which case the boggy turbinates were red and showed marked capillary injection. There often was an excessive thin mucoid discharge similar to that seen in an allergic rhinitis. It seemed to us that the discharge in these cases was thinner than in the case of uncomplicated allergy, although in making a differential diagnosis many times repeated nasal smears were checked and it was not until several smears were found to be negative for eosinophilia that we could be sure that an allergic membrane was not being observed. As a result of the marked swelling of the nasal mucosa, many of these patients complained bitterly of nasal obstruction and often sleeping, studying and physical activities were necessarily curtailed. In some of these children, pale edematous membranes extended into the pharynx and a few had a boggy appearing uvula. Although four of the children showing the above symptoms were known to have a seasonal pollinosis, these mucous membrane findings and repeated nasal smears were made during the winter months when the known irritants had ceased to exist.

Twenty of the children showed hyperactivity on examination or were described by parents and teachers as restless, fidgety children. Excessive activity is not a symptom commonly recalled to mind in hypothyroid individuals. Quite the reverse is true. We are used to associating apathy and sluggish reactions with hypothyroidism. In Dorff's⁴ report which we mentioned previously, are several cases which were restless and unstable and appear to be comparable to the animation exhibited in part of our group.

A group of twelve patients who showed hyperactivity also presented lack of attention, anorexia, small stature, nervousness, simian-like behavior, and irritability; and resemble the group described by Rose⁶ as examples of "paradoxical hypothyroidism." This term certainly is an apt one, for these little individuals suggest "hyper" rather than "hypothyroidism."

Shortness of stature was a significant finding in eleven subjects.

Obesity was present in eight patients, and was treated by thyroid substance as well as a twelve or fifteen hundred calorie diet in the more extreme cases.

Slowness in school was an important complaint in eight children.

Irritability and chronic fatigue each were found as noteworthy complaints in eight records.

Hypogenitalia was present in five male children and was accompanied by undescended testes in two instances.

Five patients showed a tendency to a persistent anemia of a hypochromic type.

Constipation was an important complaint in two histories.

Results of Therapy

The results of therapy were studied and the progress of each case was summarized and seems best expressed in degrees of improvement observed as indicated below:

	No. Cases
Marked improvement of major complaints.....	21
Moderate improvement of major complaints....	9
Slight improvement of major complaints.....	8
No improvement of major complaints.....	2
Insufficient time elapsed to make a report.....	1

Discussion

The frequency of repeated upper respiratory infection as a complaint and the large proportion

of children in this group who complained of nasal obstruction or who showed boggy, waxy, turbinates, brings out the point discussed by Bryant² and already alluded to earlier in this paper, that patients who, after adequate vitamin therapy, iron medication, and improved local as well as general hygiene, still are having repeated symptoms of disturbed respiratory tract membranes should be considered as possible hypometabolic or hypothyroid patients and should be investigated accordingly. From our experience we feel that some improvement will be obtained in many, although we readily admit that this will not be true in every stubborn case, as thyroid substance is not a panacea and the cases must be carefully studied and classified. Fourteen of the twenty-two children who had chronic respiratory infections as a chief complaint showed marked improvement and eleven of the children who showed the turbinate mucous membrane changes, exhibited satisfactory improvement while under treatment.

Bryant² mentioned that other chronic infections which persist in spite of the usual or accepted treatment should be considered as possible hypometabolic disturbances. We feel that a few cases under our observation bear this out. Three of the children in this report had repeated styes which persisted although all common means of preventive treatment were used. After the children were found to be hypometabolic problems and treated with desiccated thyroid, the lids became more resistant to infection and all three have been without the appearance of new styes for several months. Another example is the case of a girl of two and a half years who suffered from recurrent pyelitis and bouts of high fever over a period of six months in spite of every effort of two pediatricians and a urologist to keep the urinary tract free from infection. She was finally examined for possible metabolic disease and was found to show marked delay in carpal development and subsequently was given desiccated thyroid and has remained free from fever and the urinary tract free from pus and demonstrable bacteria for several months.

About half of the children showing hyperactivity as a chief complaint were definitely improved and appeared less restless.

One-half of the children in the smaller group who showed lack of attention, anorexia, small

stature, nervousness and irritability in addition to hyperactivity and which we have grouped as examples of "paradoxical hypothyroidism," showed marked improvement while under thyroid medication.

Those children who showed short stature, obesity, slowness in school, irritability, fatigue, hypogenitalism, anemia and constipation were found to respond to the medication in sufficient numbers to please the parents and to encourage us to study children showing similar complaints with a certain degree of optimism.

The accompanying table indicates the amount of improvement noted in each important clinical finding or complaint.

Clinical Findings	Number of Cases Showing Degrees of Improvement				
	Marked	Moderate	Slight	None	No Report*
Repeated U.R.I.	14	6	0	2	0
Dry hair and skin	6	5	2	3	1
Nose symptoms	11	5	0	1	1
Hyperactivity	10	10	0	0	0
Paradoxical hypothyroidism	6	4	1	0	1
Short stature	6	2	0	0	3
Obesity	3	2	3	0	0
Slowness in school	3	1	3	1	0
Irritability	5	2	0	0	0
Fatigue	5	1	0	1	1
Hypogenitalia	3	2	0	0	0
Anemia	5	0	0	0	0
Constipation	2	0	0	0	0

*Insufficient time elapsed to judge.

Summary and Conclusions

1. Children who show extraordinary resistance to the usual management for prevention of repeated upper respiratory and other chronic infections should be studied for possible metabolic disorders.

2. Children who show extreme irritability, restlessness, hyperactivity, anorexia and small stature may be suffering from so-called "paradoxical hypothyroidism" and should be studied with this in mind.

3. The more common findings in hypothyroid cases such as stunted growth, obesity, slowness in school, irritability, fatigue, anemia, and constipation respond to specific treatment in the majority of cases in about the same proportion as the less commonly recognized findings in the borderline or "masked" cases.

4. We hope that this report will stimulate others to prove or disprove our impressions.

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MSMS

Progressive Pseudohypertrophic Muscular Dystrophy*

A New Regime of Treatment

By Hira E. Branch, M.D.

Flint, Michigan

HIRA E. BRANCH, M.D.
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THE second sentence of the American Declaration of Independence begins with this statement, "We hold these truths to be self-evident—that all men are created equal." This statement is refuted by many pseudohypertrophic muscular dystrophy individuals. They are not created equal. They are composed of inferior materials and are commonly begot by inferior individuals. The disorder is always based on heredity. The hereditary element has been carefully worked out by Drs. Kostakow and Bodarive at the Medical Clinic of Bonn University. Pseudohypertrophic muscular dystrophy is divided into two types; the infantile, noticed at the age the in-

*Presented before the American Medical Association, New York, 1940.

PSEUDOHYPERTROPHIC MUSCULAR DYSTROPHY—BRANCH

dividual should start walking, and the juvenile, noticed later in childhood after a period of years when the individual appeared to be normal.

The infantile type of dystrophic muscle appears waterlogged, the individual fibers are degenerated, and fibrous tissue is profuse between the fibers. In fact the moisture content⁶ of these degenerated muscle fibers is much higher than normal. This infantile type of muscle is pale and is not vascular on section. Thus we expect all the muscle constituents to be decreased in amount. That is just what we find. The moisture content is increased but the creatin, magnesium and myoglobin are markedly decreased. In fact there was no magnesium in the cases of the infantile type of dystrophy that we biopsied and tested. The magnesium is thought to be very important and I will discuss that later.

The juvenile type is different in that the muscle fibers appear more nearly normal as regards the

son we should find a better content of creatin, magnesium and myoglobin in the juvenile type



Fig. 1. G. N.—A hopeless untreated case of pseudohypertrophic progressive muscular dystrophy.

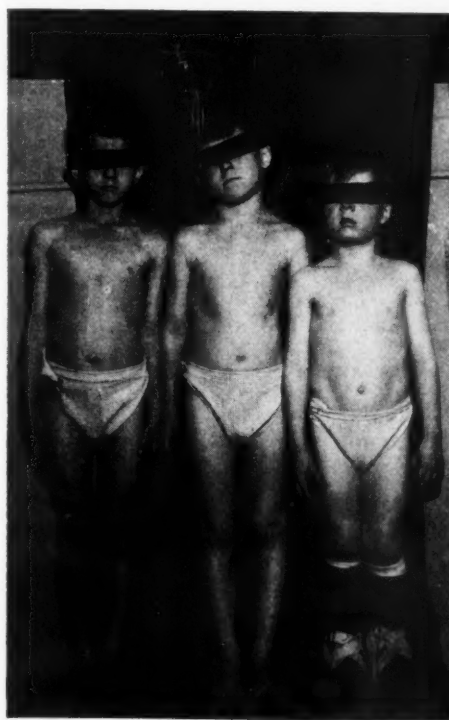


Fig. 2. (from left to right) S. P., J. L., H. G. All are dystrophic patients. Notice similarity of appearance even though the nationality varies.

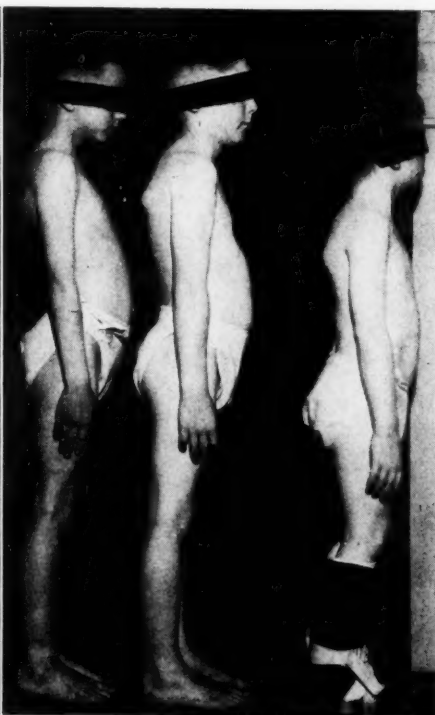


Fig. 3. (from left to right) S. P., J. L., H. G. Lateral view of children in Figure 2. Notice increased lordosis and prominent abdomens. Contractures of H. G.'s feet have been corrected by stretching and casts applied to hold the correction.

pigment, size of the fiber and moisture content. However, there is a definite degenerative change present, there is a fat infiltration between the fibers rather than a fibrous infiltration, and there are fewer individual muscle fibers. For this rea-

than in the infantile, and I believe most workers find this to be so.

The above introductory remarks are made to emphasize the point that these unfortunates have not been created equal and are inferior. The

musculature is inferior as the above proves. The mentality is inferior as has been shown by mental tests in every one of my cases.

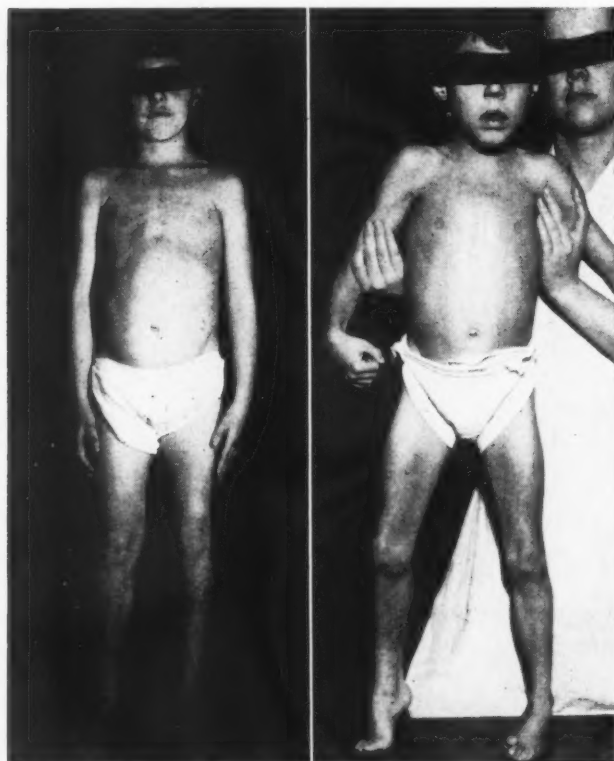


Fig. 4. H. L. (left) showed gradual improvement but regressed somewhat after treatment was stopped in June, 1939.

Fig. 5. A. V. (right) plainly shows a low mental age. Contractures shown at start of treatment were corrected only to recur during a long illness due to bilateral ear and mastoid infections.

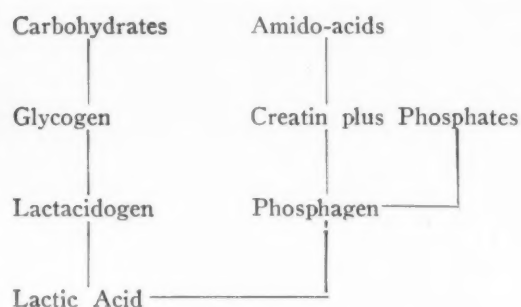
Previous Methods of Treatment

There have been many methods of treatment for pseudohypertrophic progressive muscular dystrophy. They have all failed to cure. They were doomed to failure from the start for no one should expect to make normal muscle where there is no normal muscle. The object of treatment is to take the inferior musculature of the dystrophic individual, and make available to this muscular system the substances necessary for the efficient functioning of that system. In addition to having the substances available, there must be given something that will make possible the utilization of these substances by the muscles.

The glycine treatment has been used extensively. It has not benefited the dystrophy patients treated at the Children's Hospital of Michigan. Other workers and clinics have not found glycine beneficial in pseudohypertrophic muscular dystrophy. The glycine treatment is based on a false premise. It is based on the assumption that

feeding glycine results in an increase in the creatin excretion in the urine, the mechanism of which causes a beneficial effect upon the muscles. It is true that feeding glycine causes an increase of creatin in the urine *but we do not want this*. We want to increase the creatinin excretion, not the creatin. The administration of glycine exerted little influence on the creatinin excretion. In general,² the greater the deviation of creatinin excretion below normal, the greater is the patient's disability. Thus although the glycine treatment increased the creatin excretion it had little or no beneficial effect upon the creatinin excretion, or the dystrophic individual.

Further convincing proof of the glycine false premise is easily seen in the following table. This table is postulated on the basis of the work of P. Eggleton, G. P. Eggleton and Lundsgaard, as epitomized by A. V. Hill: The Revolution in Muscle Physiology (Physiol. Rev., 12:S6. [Jan.] 1932).



During muscular contraction phosphagen is split into creatin and a phosphate by which energy for contraction is set free. After contraction the lactic acid appears, phosphagen is restored. (Creatinin, one of the by-products, is excreted.)

The accompanying table shows that creatin is necessary to the normal functioning of muscle. Creatin is present in the urine of dystrophic individuals to an extent much greater than normal while creatinin is commonly less than normal. Glycine treatment increases the creatin excretion but not the creatinin. This is not a beneficial effect, for there already is too much creatinuria. Therefore, in dystrophies the creatin does not get into the muscle or the muscle is unable to utilize it. What is needed then is something that will make the creatin in the body available so that it may be utilized by the muscle and accordingly increase the amount of creatinin excreted. If either the creatinin excretion alone or

both the creatinin and creatin excretions be increased then it should indicate an improvement in the progressive muscular dystrophy individuals.

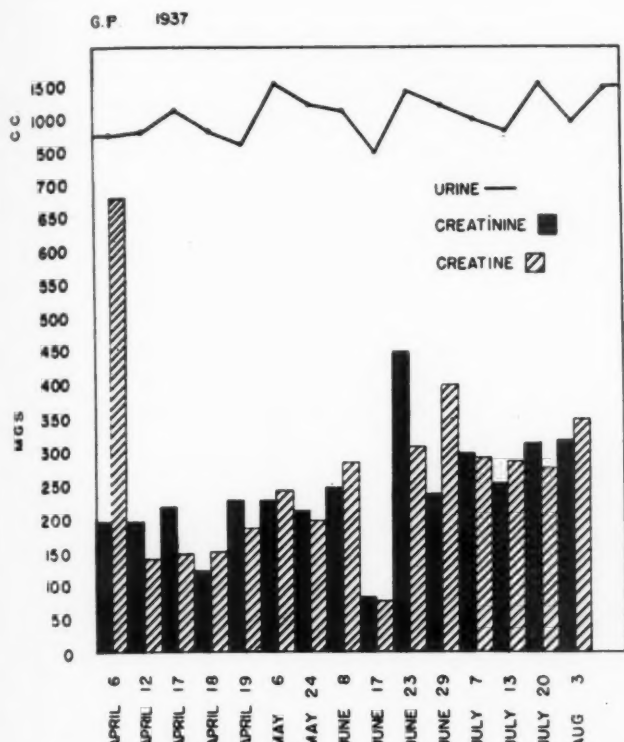


Chart 1. Urinary creatinin and creatin excretion of an advanced case of pseudohypertrophic progressive muscular dystrophy. There is a distinct rise in the creatin output which indicates an improvement in the individual.

Development of a New Regime

In the development of a new regime of treatment there are certain facts that are known about progressive muscular dystrophy that are listed below:

1. The outstanding one is the increase of creatin in the urine.
2. The gradual replacement of the degenerating muscles by infiltration of fat.
3. The marked decrease to total absence of magnesium in the muscle.
4. The decrease of myoglobin in the muscle.
5. The disease tends to arrest as the individual matures.

There are other factors in addition to those listed but their importance in regard to treatment is not striking. The disconcerting factors are: the disease is hereditary, the musculature is inferior, the mentality is inferior. Therefore a cure is not to be hoped for. However, the pathetic picture of these nice looking, healthy appearing but hopelessly weakened children coming in to the clinic year after year caused me to attempt a regime which might arrest their disease early. I

wish to present my rationale of treatment, a few case reports, charts and impressions as a preliminary report so that other workers may prove or disprove the value of this regime.

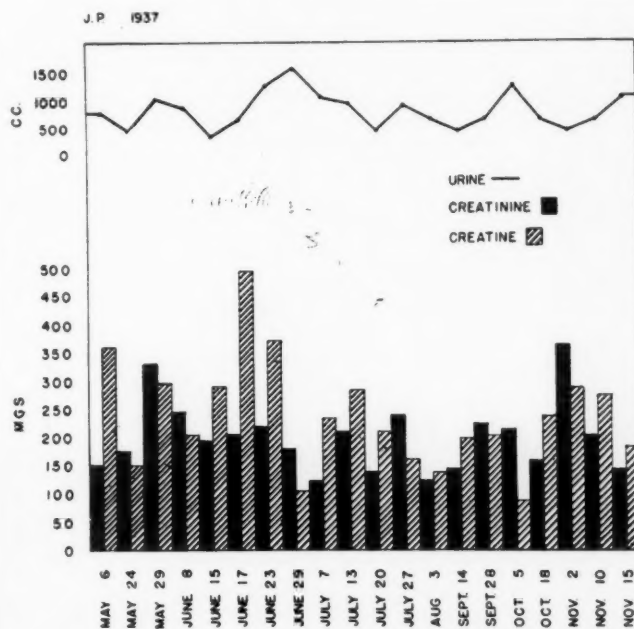


Chart 2. Urinary creatinin and creatin output of an advanced case of pseudohypertrophic progressive muscular dystrophy. The creatinin excretion maintained a high level throughout the experiment and was little influenced by treatment.

Rationale

I now wish to take individually the known facts listed above and rationalize from them the regime which has given encouragement in this disease.

1. Creatin is materially increased in the urine in pseudohypertrophic muscular dystrophy, during childhood up to ten or fifteen years of age, and in the adult during certain physiologic processes such as lactation, menstruation, or in a variety of pathological processes such as fever, starvation, severe diabetes or other conditions associated with deprivation of carbohydrates. Nutritional creatinuria is easy to correct by regulation of the diet. In fever the creatinuria clears when the temperature remains at normal. In normal adult females there is creatinuria during menstruation and lactation but not at other times. There must be some substance that inhibits the creatin excretion normally or that sets it free during menstruation and lactation. What might it be other than female sex hormone? At any rate if female sex hormone would prevent menstruation, and it will, it might influence creatin in the body so that it could be utilized instead

of excreted. If creatin was utilized then creatinin excretion should be increased in amount. Thus female sex hormone was used in two hopeless patients, first in an effort to work out the dosage

lar in that on "cholesterol" fatty liver the main effect is to decrease substantially the glycerine content of the livers and to a lesser extent the cholesteryl ester formation. Thus it seemed that

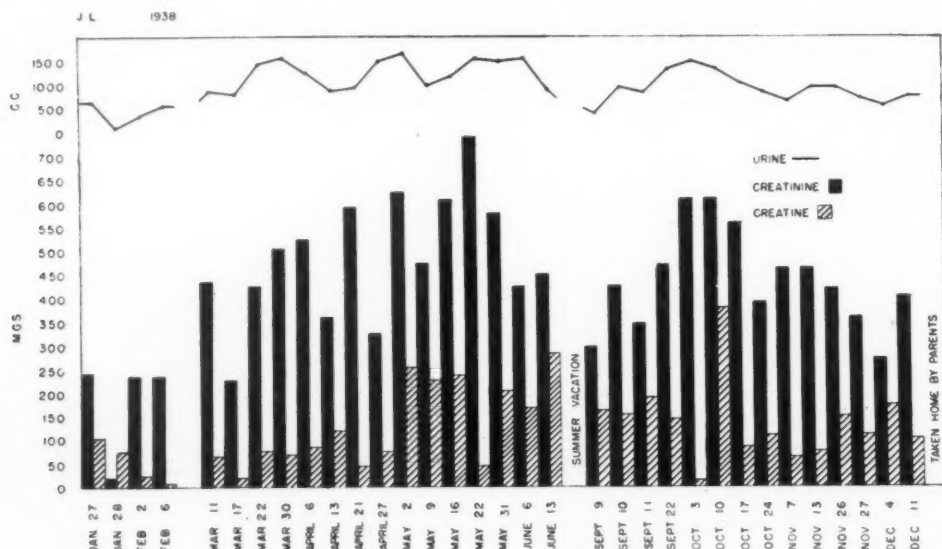


Chart 3. Marked rise in creatinine excretion coinciding with a remarkable clinical improvement.

and second to see if the creatin-creatinin excretion would be influenced. (See Charts 1 and 2.)

2. The replacement of the muscles by fat is a disturbing fact and there is nothing similar in normal individuals. Perhaps this is due to a disturbance in the metabolism of fat. A search was made for a drug that would influence fat metabolism.

It is known that the presence of choline in the diet of rats favors the normal distribution of fat⁸ between the liver and the body depots, and prevents the failure of certain functions of the liver. Choline has been shown to exercise prophylactic and curative effects² on the "fat" fatty liver and the "cholesterol" fatty liver of rats produced under a variety of experimental conditions. Diets deficient in choline and other lipotropic factors³ produce an accumulation of fat in the livers of white rats. In these rats the administrations of choline always prevent the deposition of liver fat, and under certain conditions it appears to act favorably on the gain in weight of the animals. The results of experiments suggest that choline may improve the "general condition" of the rats. Homocholine⁵ (trimethyl-y-hydroxypropyl-ammonium hydroxide) is stated to be more effective in controlling the percentage of fat in livers than is choline. The action is simi-

lar in that on "cholesterol" fatty liver the main effect is to decrease substantially the glycerine content of the livers and to a lesser extent the cholesteryl ester formation. Thus it seemed that

3. The rôle of magnesium is largely hypothetical. Benjamin Cassen, Ph.D., formerly of Harper Hospital, Detroit, and now connected with Westinghouse Research Department of Pittsburgh, first drew my attention to this interesting and important element. Magnesium is detected in muscle tissue by means of the spectrograph. In the infantile type of pseudohypertrophic muscular dystrophy there were no magnesium bands, in the juvenile type the bands were present and normal in amount.

The role of magnesium has not been definitely proved. However a great deal of circumstantial evidence⁴ seems to indicate that cells and muscles, in particular, contain an organo-magnesium compound of non-proteinic nature in which the magnesium is in nonionic form. This compound is a catalyst for the final stage of the combustion of carbohydrate to carbon dioxide and water. It is known that catalysts can catalyze a reaction in

either direction. The inverse reaction, the synthesis of carbohydrates from water and carbon dioxide, is catalyzed by a magnesium containing nonionic substance, chlorophyll.

fibrous tissue that the muscle fibers seem to have little myoglobin and undoubtedly could not use it satisfactorily if they had lots of it. In the juvenile type of pseudohypertrophic dystrophy the

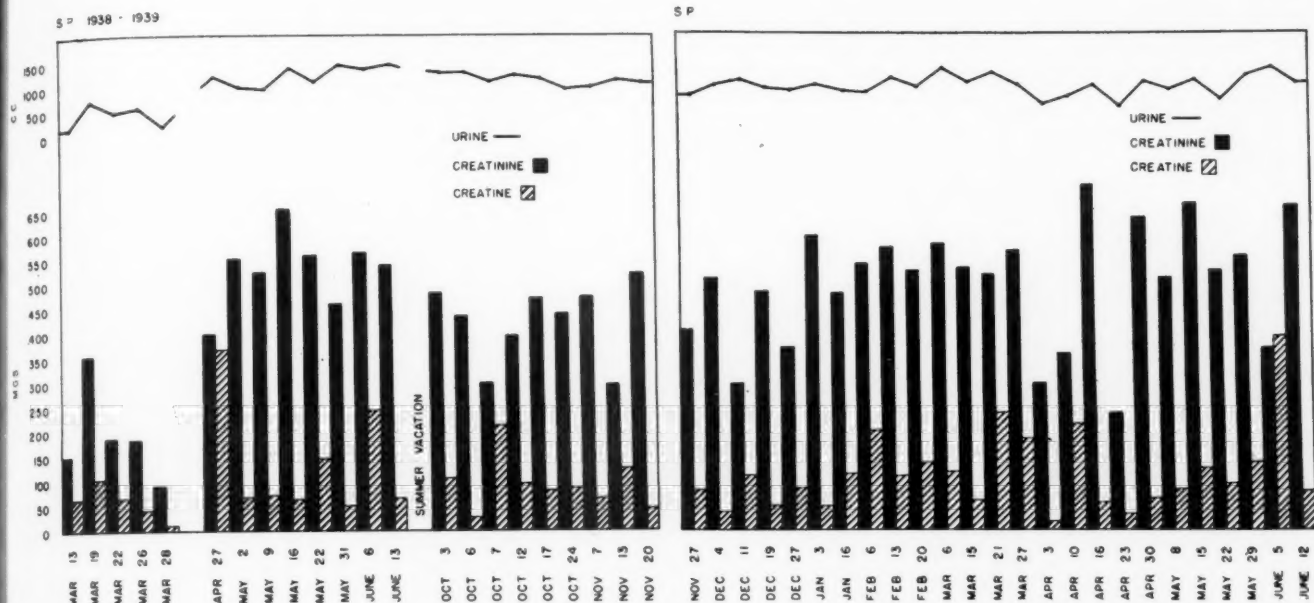


Chart 4. A decided rise in creatinin excretion is shown. This coincided with marked clinical improvement in the pseudohypertrophic dystrophy patient. He now runs, plays baseball and gets up without "climbing."

The magnesium content of the infantile type of pseudohypertrophic dystrophy muscles is nil and the moisture content is above normal. It is an easy step to give a diet containing magnesium in the hope this condition might be remedied. Cows milk contains magnesium in fair amounts, goat milk even more so. Camel milk has an even greater magnesium content though it is not available but cow and goat milk is. Thus the dystrophies were given abundant cow's milk and some were given goat's milk in the hope the magnesium might be utilized in the muscle cells.

4. Myoglobin⁷ is less in the dystrophic muscles than in normal muscles. It is probably less in the infantile type of dystrophic muscles than the juvenile type. I feel this is so because of the decreased muscle tissue present in the infantile type and the increase of fibrous tissue present. I have no definite proof of this. However, the blood of dystrophy patients is about normal and there is an abundant source of materials for the formation of myoglobin in the body. It should not be necessary to add to this source other than to prevent anemia in these patients. In the infantile type of pseudohypertrophic dystrophy the muscular system is so waterlogged and infiltrated with

muscle appears to have about normal myoglobin if only the muscle fibers are examined and not the fat. Thus no attempt was made to furnish myoglobin other than to keep the blood in as normal a state as possible.

5. The fact that the progression of the disease is less as the dystrophic individual matures is intriguing. Why not make these children mature as fast as possible in the hope the disease may become quiescent? I suggest that an extract of anterior pituitary glands be given. This might bring maturity faster, but even though it did not it would enhance the value of the female sex hormone. It was not used in these experiments as it might have obscured the results obtained by the female sex hormone.

Resume of the New Regime

1. Female sex hormone is given in an effort to favorably influence the creatin-creatinin utilization and excretion.
2. Choline, in the form of the hydrochloric or the chloride, is fed in an effort to favorably influence the metabolism and deposition of fat.
3. An attempt to make magnesium available in the body and muscular system is made by

giving abundant quantities of cow's milk or goat's milk.

4. Anemia is prevented.

5. An extract of anterior pituitary glands

surgery. Stretching a dystrophic muscular contraction is similar to bending a lead pipe—there is a rubbery resistance at first which gives way suddenly after so much correction (or bending)

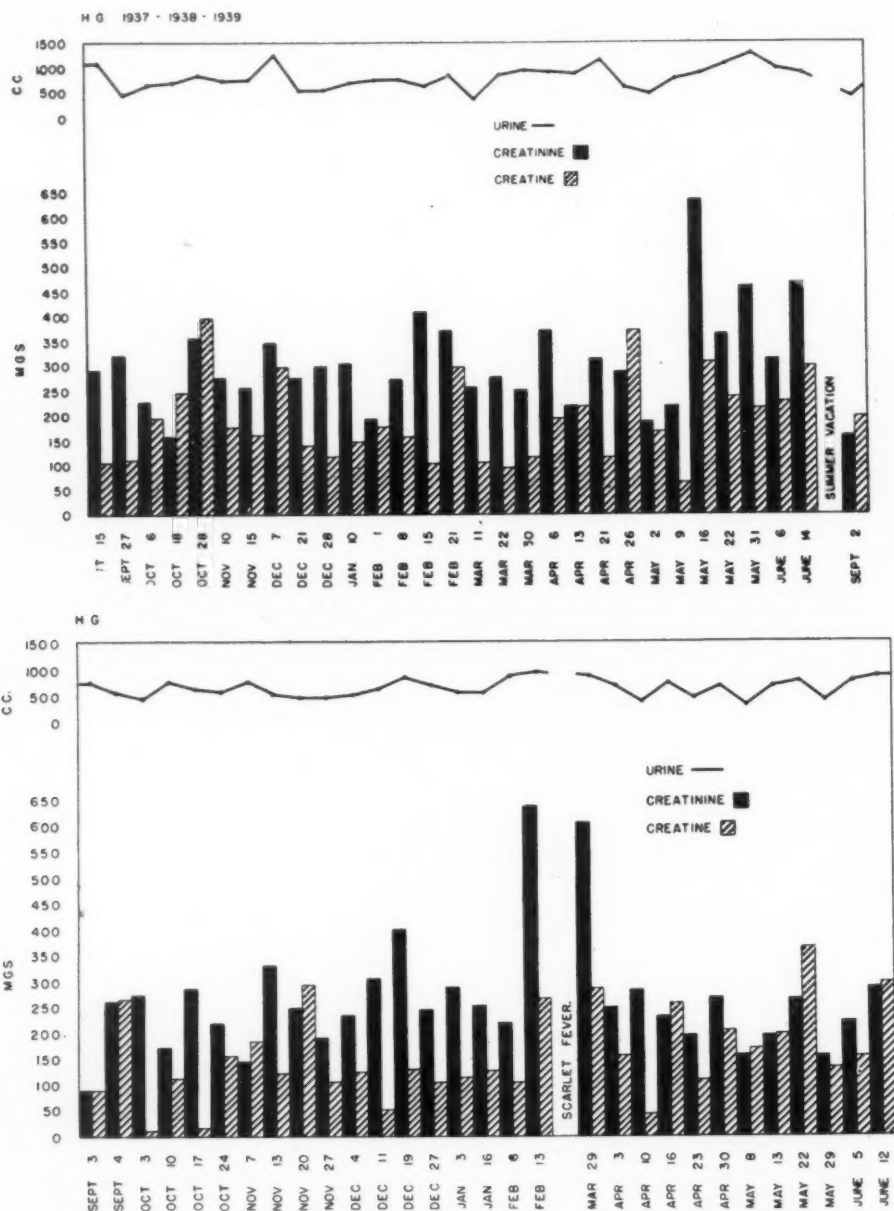


Chart 5. Creatinin output remains above normal throughout this regime with definite rises far above normal. The boy improved. He now touches toes and arises without "climbing," runs about and can be lifted by his shoulder girdles.

might be given in an attempt to hasten the maturity of the patients, and enhance the effect of the female sex hormone.

6. In addition to the above, general setting-up exercises, physiotherapy, fresh air and sunshine is administered.

Contractures are overcome by gentle manipulation and stretching under an anesthetic—not

has been obtained. Surgical lengthening of these dystrophic muscular contractures only makes the muscle weaker. All the patients are given corsets to splint the weakened abdominal and back muscles.

Case Reports

Case 1.—G. P., born October, 1927. Convulsion at one week and again while teething. Walked at eighteen months but weak and shaky. Father a drunkard. Mother

PSEUDOHYPERTROPHIC MUSCULAR DYSTROPHY—BRANCH

er and one sibling living and well. One sibling with pseudohypertrophic progressive muscular dystrophy. Patient a hopeless case, used to observe effect of regime. April 20, 1937, started on 25 rat units female sex hormone daily, increased to 50 units daily five days each week on April 27.

advice, stating he was so near normal he needed no more treatment.

Case 4.—S. P., born October, 1930. Walked at two years with difficulty and on toes. Father dead (pneumonia). Mother and seven siblings well. February 23,

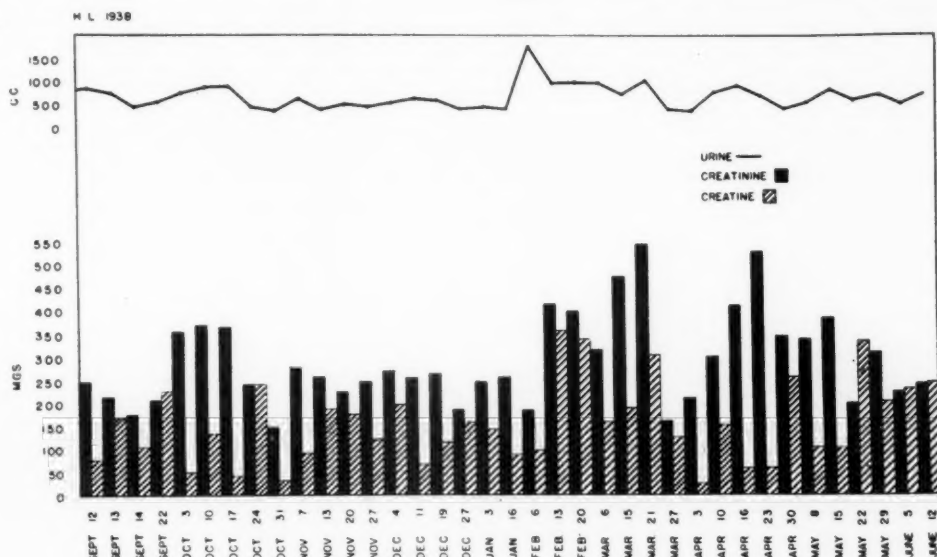


Chart 6. Creatinin excretion is definitely above normal. Clinically the boy gradually improved. He regressed slightly after the treatment was stopped for the summer months.

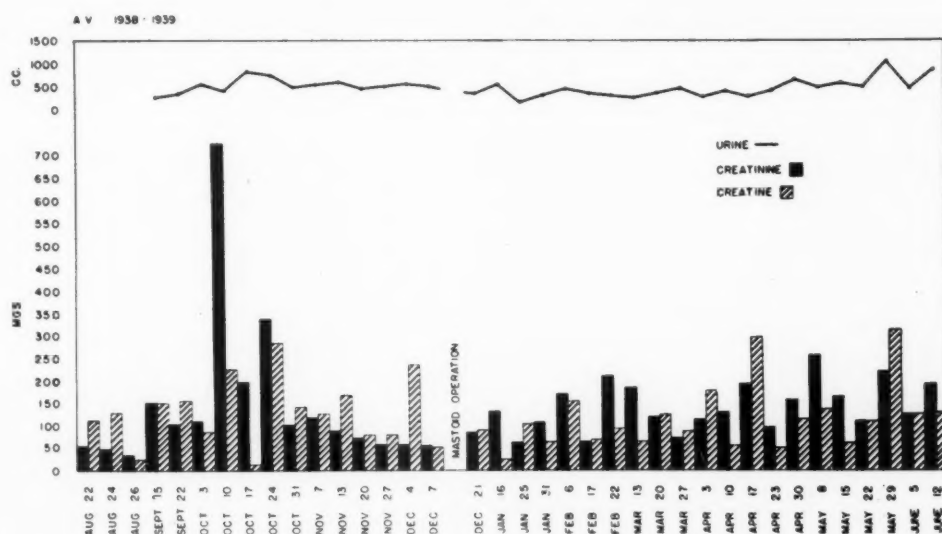


Chart 7. Urinary creatinin and creatin output of a refractive case. There is little change in the creatinin excretion. No clinical improvement was seen.

Case 2.—J. P., born September, 1926, brother of G. P. Difficulty walking since eighteen months. Hopeless case, used to observe effect of regime. April 20, 1937, started on 25 rate units female sex hormone daily and increased to 50 units daily five times each week, on April 27.

1938, started on choline gr. XV T.I.D. and 50 rat units female sex hormone daily five times each week. Muscular strength increased enormously. Touches toes, gets up normally, can be lifted by shoulder girdles. Walks and runs but has weak abdominals and mild "Alderman's" gait.

Case 3.—J. L., born May, 1931. Weakness noticed in September, 1937. Mother, father and two siblings living and well. February 3, 1938, started on choline gr. XV daily. No ill effects. February 8, choline gr. XV T.I.D. and 50 rat units female sex hormone daily five days each week, was started. Clinical improvement marked. Muscular strength so increased that parents took child home in December, 1938, against

Case 5.—H. G., born October, 1931. Weakness, stumbling since starting to walk. Contractures present. Mother, father and three siblings well. September 21, 1937, started on 50 rat units female sex hormone daily five times each week. January 18, 1938, tonsillectomy and adenoidectomy. June 29, 1938, treatment stopped. September 8, 1938, female sex hormone again started and choline gr. XV twice daily started. March 22, 1938,

OCTOBER, 1941

bed ridden for three weeks with scarlet fever. Child improved definitely, contractures eliminated. Touches toes and arises without climbing. Can be lifted by shoulder girdle.

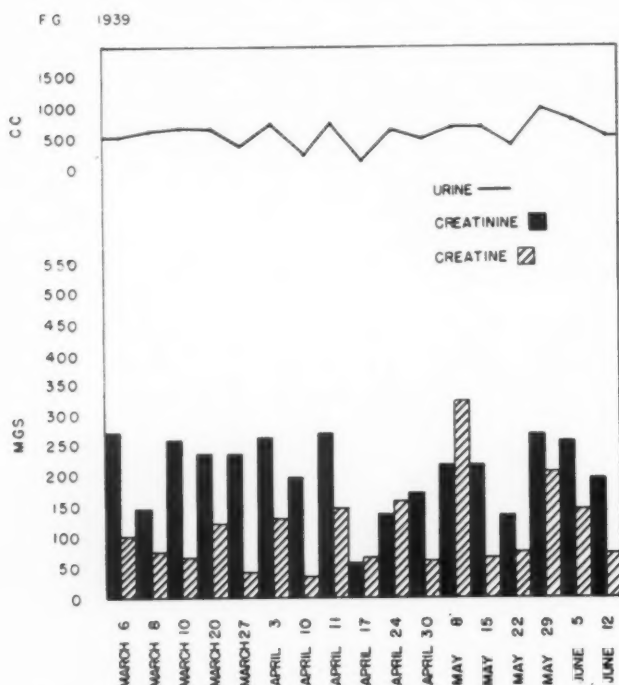


Chart 8. A young but severe case of dystrophy. The boy definitely improved clinically. The creatinin excretion was maintained about normal.

Case 6.—H. L., born July, 1931. Increasing weakness since starting to walk. Parents and one sibling well. Sept. 20, 1938, started on choline gr. XV T.I.D. and 50 rat units female sex hormone daily five times each week. Examination June, 1939, showed considerable improvement, runs and walks, can be lifted by shoulders, can touch toes and arise without climbing.

Case 7.—A. V., born September, 1930, unable to walk or stand alone since birth. Contracture legs and hips (see picture). Mentality low. Parents well. September 15, 1938, started on choline gr. XV T.I.D. and 50 rat units female sex hormone daily five times each week. Oct. 25 could walk with aid of one finger to help support him. January 29, 1939, acute otitis media bilateral. Regime discontinued. February 2, mastoidectomy. March 7, tonsillectomy and adenoidectomy. January 9, 1939, placed on regime of medication. Contractures recurred during his severe illness, patient refuses to sit or walk. Sent home for summer with crutches. Result a failure.

Case 8.—F. G., born Dec., 1932. Weakness since starting to walk. Mother and father well. One brother dead, suffered from muscular dystrophy. Patient on admission to hospital unable to walk up or down stairs, cried when placed on feet and yelled he could not walk. March 14, 1939, started on choline gr. XV T.I.D. and 50 rat units female sex hormone daily five days each week. Examination June, 1939, showed marked improvement clinically. Runs, walks well. Touches toes and arises without climbing. Can be lifted by shoulder girdle.

Results

Eight patients were used in this experimental work. G. P. and J. P. were hopeless cases used

only to observe the effect of the female sex hormone. Chart 1 reveals a definite increase in the creatinin excretion after treatment was started on April 20. Chart 2 reveals the creatinin excretion to be maintained at normal with occasional elevations above normal.

The next six cases were placed on the regime of treatment in an effort to improve their general condition and arrest the progression. Three of these patients had a marked increase in the muscular power, two patients had a definite improvement but not approaching normal. One patient (A. V.) had slight improvement at first then developed bilateral otitis media and mastoiditis, and end result was a total failure. The charts bear out the clinical improvements. Charts 3, 4, 5 and 6 show definite increase in the creatinin excretion. Chart 8 maintained a normal creatinin excretion. Chart 7 shows no influence on the creatinin excretion as a result of treatment.

Comment

A new regime of treatment for pseudohypertrophic progressive muscular dystrophy is offered. The results over a three-and-a-half-year period are so encouraging the regime is presented in this preliminary report in the hope other workers will try it, and thus prove or disprove its value.

I wish to express my sincere appreciation to Dr. F. C. Kidner. Dr. F. E. Curtis and Dr. Charles W. Peabody of the orthopedic staff of Childrens Hospital of Michigan for the use of their patients in this study.

I thank the laboratory staff of the Childrens Fund of Michigan for their aid in the blood and urine analyses.

I thank Dr. Plinn F. Morse, chief of the Pathology Department of Harper Hospital, for his aid in the microscopic pathology.

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MILITARY SURGEONS MEETING

The Association of Military Surgeons of the United States will meet October 29 to November 1 at the Brown Hotel, Louisville, Ky.

All members of the medical profession are invited to attend as guests and it is particularly hoped that as many members of the Medical Defense Committees as possible will come.

The session concludes with a mass review of Military Medicine and an inspection of Fort Knox.

JOUR. M.S.M.S.

Sarcoma of the Urinary Bladder

With Report of Case

By William E. Keane, M.D.

Professor of Urology, Wayne University, College
of Medicine

Detroit, Michigan

WILLIAM E. KEANE, M.D.

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■ SARCOMA of the urinary bladder is seldom seen by the urologist and rarely are these tumors seen early. For that reason the following case is reported with its salient features as to diagnosis and treatment together with an accompanying brief review of the literature.

Vesical sarcomas, as a rule, originate in the sub-mucous and muscular layers of the bladder wall. They are, therefore, intramural in the vast majority of cases, but generally become intravesical, polypoid, and papillomatous by invasion of the overlying mucosa, which may remain intact or ulcerate. Because of their extreme vascularity, they appear dark red to reddish blue on cystoscopy. In this connection Albarran held, that myoma and fibro-myxoma of the bladder were also malignant tumors and probably closely allied to myxosarcoma.

Myxomas are very malignant and grow with extreme invasiveness. They occur usually during the first decade of life. According to Deming 24.5 per cent of vesical neoplasms during the first years of life are myxosarcomas. Characteristically they are soft, smooth, gelatinous and lobulated. They are composed of richly vascular loose connective tissue covered by squamous epithelium. Metastases are unusual and are absent in the majority of autopsied cases, but when they do occur the common sites are the sacral glands, lungs, liver and bones. Herman,³ in describing the clinical features of this new growth says: "Vesical sarcomas are most frequent before the tenth and after the fiftieth year."

Symptoms

Hematuria is usually intermittent, often profuse and may be the initial symptom. The dominant early clinical feature besides hematuria, is urinary obstruction associated with pain and strangury. Since these tumors are intramural they are rarely seen in what may be considered an early stage of their development and usually are far advanced as shown by the symptoms mentioned above.

Diagnosis

Cystoscopy and cystography will show the neoplasm but no characteristic feature will distinguish it from other neoplasms especially when there is bleeding from the surface. Biopsy is essential for a precise diagnosis but it is necessary that the tissue obtained is representative of the tumor so that there will be no failure to positively identify it. Bimanual palpation of the bladder wall sometimes helps to reveal the area of infiltration.

Case Report

V-18729, aged seventeen, white, female, was admitted to Detroit Receiving Hospital November 19, 1939. She was apparently perfectly well until about three and one-half weeks before admission.

History.—At that time, she began having sharp suprapubic pain at the end of urination. The pain was not very severe at first but gradually increased in intensity. Five days before admission she first noticed gross hematuria. This was bright red blood at first but the next day she passed dark blood and clots. There were no other urinary complaints. She had lost no weight and she complained of no anorexia or fatigue.

Past history was negative except for the usual childhood diseases.

Family history revealed that a half-brother died from pulmonary tuberculosis and a paternal aunt died from carcinoma of the breast.

Physical Examination.—Physical examination was entirely negative except for definite tenderness over the suprapubic area, and the palpation of a hard walnut sized mass in the right superior bladder wall bimanually.

Laboratory Examination.—Laboratory urinalysis on admission revealed specific gravity of 1.015; sugar, negative; albumin, 4 plus; microscopic: innumerable red blood cells. The Kline test was negative. Hemoglobins were 11.4 gms. Leukocytes 6,750 with 79 per cent polymorphonuclear neutrophils and 21 per cent lymphocytes.

Course.—The day following admission she was cystoscoped and the findings were as follows: Grossly bloody urine returned after the passage of the scope. Bladder capacity was 200 cc. with slight discomfort. On the right superior wall of the bladder well away from the right ureter was a growth 2.5 cms. in diameter protruding into the bladder cavity. It was not cauliflower in type but appeared like a cervix protruding into the bladder. The mucosal covering of the mass was normal in appearance except for two small hemoglobic areas from which the recent bleeding had occurred. The remainder of the bladder was entirely normal in appearance. A biopsy of the tumor was taken and the smooth surface bled readily. The pathologic report of the biopsy by Dr. O. A. Brines revealed that the amount of tissue was too small for diagnosis. A cystogram was made at the time of the cystoscopy and showed no infiltrative lesion of the bladder wall. X-ray examination of the chest was reported as entirely negative.

Because of the negative first biopsy it was thought advisable to obtain the second specimen by means of the resectoscope. A good representative section was taken after which the area was fulgurized to control the bleeding. The biopsy section was composed of slender, spindle shaped neoplastic cells, quite regular in size, with an orderly arrangement and a very loose edematous stroma. The biopsy diagnosis was fibroma or myxofibroma with added statement that sarcoma could not be ruled out. No muscularis was included in the biopsy.

Discussion at the Tumor Conference developed along the line of whether the lesion should be treated palliatively with fulguration to control bleeding or whether the portion of bladder wall occupied by the tumor should be resected. The latter recommendation was followed.

Pathologic Report.—The microscopic sections represented a neoplasm composed of very slender long cells possessing abundant cytoplasm which stained deeply with eosin. There was intercellular stroma, comparatively acellular, slightly basophilic, quite abundant in places, which was described as myxomatous. This stroma was quite richly vascularized. The neoplastic cells exhibited a tendency to form bundles. There was some irregularity in nuclear size and staining intensity with the formation of a number of giant hyperchromatic nuclei. The muscularis of the bladder was being extensively invaded, destroyed and replaced by neoplastic tissue. The pathologic diagnosis was leiomyosarcoma of the bladder wall.

Further Course.—The bleeding ceased and the remaining evidence was only the small fibrous area which could still be palpated bimanually in the bladder wall. Because the location was favorable for open operation and the questionable microscopic diagnosis of the tumor, it was deemed advisable to resect the mass by open operation rather than attack it by any other method. The bladder was opened and with good exposure the small intramural growth was easily ex-

cised. The tumor seemed to be well localized to the muscular layer of the bladder wall. The bladder wall was tightly sutured, a drain placed in the pre-vesical space and an indwelling urethral catheter inserted.

The postoperative course was uneventful and the wound healed readily by first intention. She was discharged from the hospital on the sixteenth postoperative day and forty-two days after her admission.

Cystoscopy one month postoperative revealed a bladder interior of normal capacity and contour. The cleanly healed scar was seen with no evidence of recurrence of the tumor. Another check cystoscopy one month later revealed a slight nodularity about the scar without breaking the continuity of the mucosa. It was felt that this was very suggestive of an early local recurrence of the tumor. Because of the apparent invasion of the tumor beyond the excised area and in spite of the girl's age, with possibility of resultant sterilization, it was thought advisable to give her an intensive course of deep x-ray therapy. The first series of deep x-ray therapy was begun on February 27, 1940, and consisted of nineteen consecutive daily treatments, totaling 3,800 roentgen units, alternating between anterior pelvis, including both groins and posterior pelvis. A check cystoscopy on March 21, 1940, one month after the first course of x-ray revealed a decrease in the nodularity noted on the previous examination. The next cystoscopy was on April 21, 1940, at which time no evidence of the afore-mentioned nodularity about the scar was noted. The second series of deep x-ray therapy consisted of 12 treatments, totaling 2,400 roentgen units, given from May 13, 1940, to May 25, 1940. Cystoscopy one month later revealed no evidence of reformation of the tumor. The third and last series of therapy consisted of ten treatments, totaling 2,000 roentgen units, given over a ten day period beginning August 19, 1940. With the completion of this series she had received a total of 8,200 roentgen units, given in three series, during a six months period. The most recent cystoscopy ten months after resection of the bladder tumor showed no evidence of local recurrence and x-ray of the pelvis and chest are likewise negative.

Acknowledgment and thanks are given to Dr. Donald J. Jaffar, Junior Attending Urologist, and Dr. Carl Anneberg, Resident in Urology, Detroit Receiving Hospital, for their assistance in presenting this case.

MSMS

Whisperings of a "strike" in the course of physical examinations for the Selective Service Boards are heard in one section of a highly populated county in Indiana. It seems that the medical examiners, who are doing their work gratis, expect the paid employees of the Board to do a bit of the clerical work, thus minimizing the task of the *unpaid* physicians. The *paid* employees have rebelled, stating that this is the job of the doctors. Our recommendation is that when such an occasion arises the medical men walk off the job and remain away until these suddenly-officious persons come to their senses. It's queer how a city, government or state job goes to one's head!—*The Journal of the Indiana State Medical Association*, August, 1941.

To The Future

WITH gratitude, but with a sense of humility I assume the Presidency of the Michigan State Medical Society, with thanks to our members for this high honor. I sincerely request a continuation of the generous help, interest and teamwork of the membership during my tenure of office.

Particularly from my committee workers, I request their sustained activity and effort in medical and civic affairs. The influence and prestige of the Michigan State Medical Society rest mainly on the work of its committee personnel.

Finally, I urge all members to gather into our ranks every eligible doctor of medicine, for his good and for the good of the Society. Particularly, all interns and hospital residents should be invited by active members to become affiliated, now, with the Michigan State Medical Society. In those counties having medical schools, the senior students should be urged by their professors and by the county medical society officers to attend the society meetings, both county and state. What Medicine is to be tomorrow depends upon the moulding of the young medical mind of today.

Henry Klarstey

President, Michigan State Medical Society.



President's



Page





EDITORIAL



THE BEST YET

■ THE Seventy-sixth Annual Convention has passed into the records. The almost universal opinion expressed is that it was run more smoothly than any other recent convention. Splendid arrangements for housing by the Pantlind Hotel, the coöperative spirit of the people of Grand Rapids, the enthusiasm and energy of the exhibitors, and the lavish entertainment program formed a perfect background for the unexcelled array of scientific papers.

Every speaker appeared as scheduled and not even the usual amount of dissatisfaction was heard.

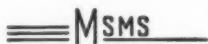
The Section meetings were so well attended that in some of them the available space was filled to capacity. Special comment was received on the value to the general practitioner of the papers which were given in the Sections.

The Discussion Conferences, an innovation of 1941, were enthusiastically enjoyed and provided a splendid opportunity to correlate the presentations from the General Assembly.

The scientific exhibits included some exceptional displays for visual education.

The attendance was eminently satisfactory, although the ultimate hope to have every practicing member of the Michigan State Medical Society register at the state convention was not reached.

Comments on the organization activities and Michigan Medical Service will be found elsewhere and it will be noted that they are proportionately satisfactory to the scientific part of the meeting.



MICHIGAN MEDICAL SERVICE

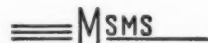
■ AT A special meeting of the Delegates and some interested members, held September 15, 1941, the night before the official meeting of the House of Delegates, several hours were spent in receiving reports and discussing the various phases of the Michigan Medical Service.

The meeting which opened with a series of discordances ended with general satisfaction and the acknowledgment that despite some apparent inequalities the program, with a few minor

changes, was desirable and its continuance to be favored. This same view was reflected the next day in official meetings of the House of Delegates.

Although a number of resolutions were introduced, only three were accepted by the House and they were referred to the meeting of the members of the Corporation. One of these asked that some investigation and experimentation be made in issuing and selling limited liability policies. Another resolution which advocated the lowering of income limits was discussed in the meeting of the Corporation with no final action being taken. One interesting sidelight was the clarification of the oft-raised question as to who had determined the existing income levels. It was finally shown that these limits had been set in 1939 by the House of Delegates without recorded opposition.

The Board of Directors of the Michigan Medical Service met during the MSMS Convention and steps were taken to begin the investigation and experimentation in the matter of limited liability certificates. At the same time authorization to contract with the General Motors Corporation and its employees toward the issuance of surgical contracts to the employees and their families was voted by the Board. This will provide between 160,000 and 170,000 new but well-seasoned subscribers to the plan. With General Motors plants in a number of cities in Michigan the benefits will be greatly extended and a greater degree of stability attained for Michigan Medical Service.



AN ERROR CORRECTED

■ INFORMATION furnished by Wilfrid Haughey of Battle Creek revealed an error in the September editorial on President Henry R. Carstens. It was stated therein that Dr. Carstens was the first son to follow in a father's footsteps as president of the Michigan State Medical Society. Not only is our present incumbent not the first

JOUR. M.S.M.S.

in Michigan to achieve this distinct honor, but he is the fourth.

Perhaps this record is unique in medical history of the United States! David Inglis, president of the society in 1905, followed his father, Richard Inglis, of Detroit who had been president in 1869. The following year, in 1906, Charles B. Stockwell became president, his father having been Cyrus M. Stockwell of Port Huron, the first president of the reorganized state society, in 1866. Leartus Connor of Detroit was president in 1901 and in 1923 his son, Guy L. Conner, succeeded in his footsteps.

Other interesting information received from Dr. Haughey disclosed that Henry O. Hitchcock of Kalamazoo was president in 1871 and his son, Charles W. Hitchcock, became secretary from 1890 to 1895. Jerome K. Jerome of Saginaw was president in 1867 and was again elected president in 1881. Andrew P. Biddle of Detroit is the only president who ever served two consecutive terms.

The profession is indeed indebted to these families of medical leaders.

MSMS THE NEW DISEASE

American physicians must prepare to cope with a new disease. It is becoming generally prevalent and may reach epidemic proportions and severity. It is contagious, and attacks all without discrimination, including those who fill the ranks of the trades and the professions.

By virtue of their training, their ethics, the nature and the demands of their profession, doctors are especially susceptible to the contagion. Until it is better named, the new disease can be called "War Fever." The future effectiveness of American medicine and the future status of the American doctor will be determined by the extent to which individual physicians are successful in immunizing themselves against the hysteria which is a symptom of and which always accompanies the disease.

The world is at war. One hundred and thirty million Americans are very much a part of this world. It is a wholly new kind of war. In times past, material advantage and territorial gains provided the incentive for wars of aggression. This is a war of ideological conquest. Material advantages and territorial gains are merely incidental to the larger purpose. It is an all-out warfare, spending lives and treasure on a scale never before contemplated or even imagined by man.

In the present situation there are too many uncertainties to enable either the wisest or the best informed reasonably to predict the extent to which it may be necessary to sacrifice the lives and material resources of this country in order to win this war. It is a known fact—and it should be faced—that we are in the process of mobilizing all of our energies and utilizing all of our resources for the accomplishment of this purpose.

It is almost needless to say that no group will be called upon to make a greater contribution than will be expected from the medical profession. It is needless to say that this contribution will be gladly, cheerfully made by American physicians. American doctors do not expect any special credit for the important service they are rendering or will be called upon to render. Their tradition, their training and experience make this attitude inevitable. Many are already enlisted for the duration. The rest will be ready when called.

However, the greatest national danger lies in the possibility of these doctors becoming victims of the "new disease." On them rests a new and most vital responsibility. It is of the utmost importance that these physicians ever keep in mind that the war itself is one of ideologies; that our first obligation and most difficult task is to preserve the Priceless Heritage of the American People that has set them over and above and apart from all the other people in the world. It is desirable to consider carrying the "four freedoms" to all the people in the world. But—it is essential that we maintain our own independence and freedom of action—"for what shall it profit a man if he shall gain the whole world and lose his own soul?" It is our task now to "hold fast that which is good."

Tomorrow will come the peace. While we unselfishly and unlimitedly serve, we should make sure that stifling control of bureaucracy is not permanently established. We should take steps to insure the preservation of the sacred doctor-and-patient relationship, the independence of the physicians, the continue progress of American medicine and the safeguarding of the public interest.

Medicine's planning and administrative agency in these fields is the *National Physicians' Committee for the Extension of Medical Service*, Pittsfield Building, Chicago, Illinois. It has demonstrated both its reliability and its effectiveness. In these times of increasing stress it should have the allegiance and financial support of every patriotic practicing physician. If your county association has not appointed an official committee to cooperate with N.P.C., it should do so at the next regular meeting.

PAY-YOUR-DOCTOR WEEK

Fourth annual "Pay-Your-Doctor Week" will be observed this year, November 2 to 8.

Inaugurated in 1938 by California Bank in Los Angeles, observation of "Pay-Your-Doctor Week" swiftly spread to scores of cities throughout the country and last year virtually achieved nation-wide recognition.

Primary purpose of "Pay-Your-Doctor Week" is to pay tribute to the members of the healing profession who quietly but relentlessly continue the battle against disease and sickness, particularly at this time when much of the world is engaged in destroying rather than preserving life.

Recognized also is the fairly widespread tendency to "let the doctor wait" until all other bills have been paid.

Sponsors of "Pay-Your-Doctor Week" point out that the plight of the country doctor who is often paid with farm products or a share in next year's crop has been widely publicized in recent years while little has been said about the city doctor whose reward for services rendered all too frequently consists mainly of long hours of practice and vague promises of payment sometime in the future.

Because "Pay-Your-Doctor Week" was originated and is sponsored by the banking profession, the question of medical ethics is not involved.

Banks sponsoring the week throughout the country call attention to the fact that funds are available to lend for the purpose of paying doctor bills.



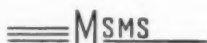
YOU AND YOUR BUSINESS



THANKS

The Council of the Michigan State Medical Society has placed on its minutes a vote of thanks to all who contributed to the extraordinary success of the State Society's 1941 Annual Meeting. The Council is grateful to the guest-essayists, their "ubiquitous hosts," the officers of the Society, the chairmen and secretaries of the General Assemblies and of the Sections, the Discussion Conference Leaders, the Monitors of the Sections and Discussion Conferences, the efficient Press Relations Committee, the Hospitality Committee, the Grand Rapids Committee on Arrangements, the Scientific and Technical Exhibitors, the Radio Stations, the newspapers for many columns, the Grand Rapids Convention Bureau, our friends who sponsored lectures at the General Assemblies, the management of the Kent Country Club, the Kent County Medical Society, and all who by their active help made the meeting such an enjoyable and instructive affair; not the least, thanks are due to all the members who by the hundreds left their busy practices in all parts of the state to visit Grand Rapids for the 76th Convention of the Michigan State Medical Society.

Ladies and Gentlemen, thank you again!



PHYSICIANS MAY SELECT HOSPITALS FOR AFFLICTED CHILDREN

Section Six of the Afflicted Child Law (Act 283 of the Public Acts of 1939) specifically states:

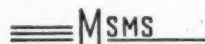
"The Commission may enter an order, directing that such child be conveyed . . . to a hospital in the State selected by the attending physician, and which has been approved and designated by the Commission for the care of Afflicted Children."

This applies, at the present time, only to *Afflicted Children*.

If any attempt is made to take this prerogative away from a physician, he should cite the above section of the Afflicted Child Law as his authority and insist upon his rights, provided the hospital of his choice is approved by the Commission and is in his locality.

MEDICINE OUT OF THE AIR

At the 76th Annual Meeting of the Michigan State Medical Society, radio played an important part. Radio Stations WOOD and WLAV of Grand Rapids coöperated wholeheartedly by giving freely of their time and facilities. The following talks on matters of scientific and general interest were presented during the Convention week: "The Functions of Medicine and the Michigan State Medical Society," by Wm. A. Hyland, M.D., Grand Rapids, September 15; "What the Doctor's Wife Means to the Community," by R. C. Jamieson, M.D., Detroit, September 16; "The Value of Postgraduate Medicine to the Public," by H. H. Cummings, M.D., Ann Arbor, September 17; "The Family Doctor," by W. H. Huron, M.D., Iron Mountain, September 18; and "Michigan Medical Service," by Henry R. Carstens, M.D., Detroit, September 19.

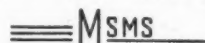


MEMBERSHIP MARCHES UPWARD

The membership of the Michigan State Medical Society, as of September 12, 1941, stood at 4,432 members, the greatest total in the history of the Society for that date.

The record for the past six years stands as follows:

	1940	1939	1938	1937	1936	1935
July	4,401	4,255	3,958	3,757	3,457	3,410
December 31	4,527	4,425	4,205	3,963	3,725	3,653



PLACEMENT BUREAU

The Placement Bureau of the Michigan State Medical Society has been working quietly during the past three years but has been doing a constructive job of finding locations for physicians as well as successfully interesting doctors in locating where more medical service is needed. No fanfare of trumpets has announced the Bureau's progress and successes, here and there. Only the communities which have been served and the doctors who have found a satisfactory locale know and appreciate the Placement Bureau's efforts. It has solved in certain instances and it continues its attempts to find a practical answer to the problem of distribution of medical service in this State.

MICHIGAN'S DEPARTMENT OF HEALTH

HENRY A. MOYER, M.D., Commissioner, Lansing, Michigan

MICHIGAN RECORD BETTER THAN NATION

Michigan's death rate was lower in 1940 than the national average and the birth rate was higher, according to provisional figures of the U. S. Public Health Service.

The 1940 death rate for the state was 9.9 deaths per 1,000 population, compared with 10.5 nationally. The birth rate comparison is 18.8 for Michigan and 17.6 for the nation.

Among the five east north central states, Michigan led the others in favorable rates. Wisconsin was second low in death rate with 10.0 and the other states had rates as follows: Illinois 11.2, Indiana 11.3, Ohio 11.3. Wisconsin also was next to Michigan in birth rates with a rate of 17.3. Other rates were: Indiana 16.9, Ohio 16.3, Illinois 15.6.

Both the low death rate and the high birth rate for 1940 are in part due to Michigan's young population. Whole families are still moving to Michigan and young men and women still are coming into the state for the same reason—opportunities for jobs.

As Michigan's population grows older, our death rate will go up and our birth rate will go down, but these are long-time effects and probably will not be apparent for years to come. As for the immediate future, we may see a higher birth rate and a slightly lower death rate in prospect for 1941.

POLIO CASES BELOW AVERAGE

Infantile paralysis cases this year are under average figures. August cases reported to the Michigan Department of Health totaled 59, compared with a five-year average of 103. In last year's record epidemic, the August total was 304 and September cases totaled 508.

In August, no county except Wayne reported as many as five cases of polio whereas last year 18 counties reported five or more cases. Wayne had 32 cases this year in August and of these 29 were in Detroit. Only one case of polio was reported from the Upper Peninsula in August. Last year the Upper Peninsula was severely affected. With only six per cent of the state's population, the Upper Peninsula in 1940 had 30 per cent of the polio cases.

—MSMS—

CANCER PROGRAM EXPANDED

Dr. F. L. Rector, for eleven years midwestern field representative of the American Society for the Control of Cancer, has been named cancer consultant for the Department, to work with both lay and medical groups. The appointment and working arrangements have the approval of the State Society's Cancer Committee, headed by Dr. Wm. A. Hyland of Grand Rapids. In

For the local Treatment of Acute Anterior Urethritis

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Silver Picrate, Wyeth, has a convincing record of effectiveness as a local treatment for acute anterior urethritis caused by Neisseria gonorrhoeae.¹ An aqueous solution (0.5 percent) of silver picrate or water-soluble jelly (0.5 percent) are employed in the treatment.

1. Knight, F., and Shelanski, H. A., "Treatment of Acute Anterior Urethritis with Silver Picrate," Am. J. Syph., Gon. & Ven. Dis., 23, 201 (March), 1939.

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OCTOBER, 1941

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his lay activities, Dr. Rector will be assisted by Miss Grace Townsend, who has a background of teaching and cancer research. The two were to join the Department staff September 15.

Dr. Rector is known to the medical and health professions of Michigan because of his field work with the American Society for the Control of Cancer. He made a survey of facilities for treating cancer in the state in 1935 and the results were published in the November, 1935, issue of THE JOURNAL of the Michigan State Medical Society. He has spoken in many of the cities of Michigan before medical societies and hospital staffs, and before college, church, women's and other lay groups.

"Michigan is unique among the states for its joint program of cancer education which the medical profession and the State Health Department are sponsoring," Dr. Rector said. "We shall try to bring its benefits to every adult in the state."

Dr. and Mrs. Rector live in Evanston, Illinois. He was graduated at Oklahoma Agricultural and Mechanical College and received his medical degree from George Washington University at Washington.

Miss Townsend has done research and has taught at the University of Chicago where she took her doctorate in zoology and biochemistry. She has done research at the Marine Biological Laboratory at Woods Hole, Mass., on the chemistry of cell division and of sensitivity of cells to the x-ray. Other institutions where she has taught include Joliet high school and junior college, Ohio State University and Miami University. Her work with the Department will be with lay groups, including the Women's Field Army of the national cancer society.

—MSMS—

DIPHTHERIA OUTBREAKS IN AUGUST

Two outbreaks of diphtheria which threatened to become old-style epidemics were brought under control in August. Both were in Mexican migrant labor

families in sugar beet areas. Three deaths occurred.

At Blissfield, in Lenawee county, a colony of 246 persons was placed under quarantine after throat cultures showed several carriers. The first cases were reported by Dr. E. V. Tubbs, Blissfield village and township health officer. An epidemiologist and the mobile laboratory of the State Health Department were sent to the colony, and throat swabs were taken of every man, woman and each of the more than 100 children in the colony. Dr. T. M. Koppa, of the Bureau of Epidemiology, went to Blissfield to assist in control measures.

Twelve cases in children were reported, including two deaths. Eighteen persons were found to be carriers. Antitoxin was used freely, and toxoid was given to the children. Dr. Tubbs arranged for toxoid treatment of all children in the village of Blissfield.

The other outbreak occurred in Saginaw county. One death occurred, a baby. Four families were isolated in the contagious unit of the Saginaw County Hospital by Dr. V. K. Volk, Saginaw county health officer.

—MSMS—

NEW SANATORIUM CONSULTANT

Consultation services for all tuberculosis sanatoria receiving state aid are now being offered by the Michigan Department of Health. Dr. Anthony D. Calomeni, since 1938 physician-in-charge of the tuberculosis unit of the Saginaw County Public Hospital, has been appointed consultant. A schedule is now being worked out to bring these new consultation services of the Bureau of Tuberculosis Control to both sanatoria and health departments.

Prior to his work at Saginaw, Dr. Calomeni served as resident physician at the William H. Maybury Sanatorium in Northville. He is a member of the Saginaw County Medical Society, the Michigan Trudeau and the American Trudeau Societies, the Michigan Tuberculosis Association and the National Tuberculosis Association.

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IN MEMORIAM

Harry G. Bevington of Detroit was born in the year 1877 and was graduated from Cleveland Pulte Medical College in 1898. Following his internship at Grace Hospital, Detroit, he entered general practice on the east side of Detroit. Later he established an office in the David Whitney Building when it was completed in 1915, which he continuously occupied until a few years ago, when his health compelled him to restrict his work. He died on July 15, 1941.

A. Milton Campbell of Lansing was born in Forest, Ontario on October 4, 1868, and was graduated from the Detroit College of Medicine and Surgery in 1898. He began his practice of medicine in Haslett, later moving to Lansing where he served the people until January 1, 1941, when he gave up his office because of ill health. Doctor Campbell, an intimate friend of many athletes, was team physician for a number of years at Central High School. He was a familiar figure on the side lines at all local games and made many trips with the football teams. He died August 17, 1941, after a long illness.

George A. Seybold of Jackson was born in 1881 and was graduated from the University of Michigan Medical School in 1904. He was past president of the Jackson County Medical Society, surgeon for the Michigan Central Railroad and a fellow in the American College of Surgery of the American Medical Association. Doctor Seybold served as a captain in the Medical Corps in the World War. He died on September 6, 1941.

William H. Riley of Battle Creek was born in Mattoax, Va., Feb. 5, 1860 and was graduated from the University of Michigan Medical School in 1886. He joined the Battle Creek Sanitarium staff the year he graduated and was sent to its branch hospital at Boulder, Colorado, where he served as director for eight years. Doctor Riley won recognition as a neurological diagnostician. He made many valuable contributions to the study of neurology, the most important of which was his invention of the ataxiograph, used in studying incoördination of the movement of the body. He served as head of the neurology department of the Battle Creek Sanitarium from 1902 until his retirement on March 27, 1938. He was elected to Emeritus Membership of the Michigan State Medical Society in 1939. Dr. Riley died on Aug. 24, 1941.

John A. Schram of St. Joseph was born in Chicago, in 1903 and was graduated from the University of Indiana in 1931. He served his internship in Methodist hospital at Indianapolis. Later he headed the Rockefeller Foundation hospital in Ohio for a year before establishing his practice in St. Joseph. He died September 9, 1941.

OCTOBER, 1941

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★ COUNTY AND PERSONAL ACTIVITIES ★

One of the most fertile fields of malpractice litigation is the allegation on the part of a patient that in reaching his diagnosis a physician did not use all necessary and obtainable diagnostic aids.—Humphreys Springstun, of the Detroit Bar. *Doctors and Juries*. P. Blakiston's Son and Co., Inc. 1935.

* * *

The American Association of Industrial Physicians and Surgeons will hold its second annual meeting, November 5 and 6, at Chicago Tower, Chicago, Illinois. The interesting program may be obtained by writing C. O. Sappington, M.D., 540 North Michigan Avenue, Chicago.

* * *

The Tumor Clinic of the J. D. Munson Hospital, Traverse City, was forced to change from monthly to weekly meetings because of increased interest by both physicians and patients. The present plan consists of a Thursday noonday luncheon followed by presentation and discussion of patients.

* * *

"Roentgen Therapy for Rheumatoid Arthritis of the Spine" by C. J. Smyth, M.D. R. H. Freyberg, M.D., and Isadore Lampe, M.D., of Ann Arbor appeared in the *A.M.A. Journal* of Sept. 6.

"Perpetuation of Error in Obstetrics and Gynecology" by Norman F. Miller, M.D., Ann Arbor, appeared in *J.A.M.A.*, Sept. 13, 1941.

* * *

Toledo University invites all members of the Michigan State Medical Society to its annual Medical Postgraduate Course, Friday, October 31, University Build-

ing, Toledo, Ohio. This year's program will be a round-table discussion led by McKeen Cattell, M.D. Harry Gold, M.D., and Eugene F. DuBois, M.D., members of the Department of Physiology of Cornell University Medical College.

* * *

The Athletic Accident Benefit Plan of the Michigan High School Athletic Association published its first Annual Report for the 1940-41 school year on August 20. Nearly half of the high schools in the state (328) participated in the Benefit Plan, registering 9,975 students for protection under the schedule of benefits. A total of \$10,550.20 was paid to member schools for 903 allowed injury benefits. For copy of this interesting report, write C. E. Forsythe, Secretary, Athletic Accident Benefit Plan, The Capitol, Lansing, Michigan.

* * *

The American Association for the Study of Goiter again offers the Van Meter Prize Award of Three Hundred Dollars and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The Award will be made at the annual meeting of the Association which will be held at Atlanta, Georgia, June 1, 2, and 3.

The competing essays may cover either clinical or research investigations; should not exceed three thousand words in length; must be presented in English; and a typewritten, double spaced copy sent to the Secretary, T. C. Davison, M.D., 478 Peachtree Street, Atlanta, Georgia, not later than April 1.

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A special "Welcome Day" for the largest class of entering students in seven years at the College of Medicine of Wayne University was held September 17 at the Gratiot-St. Antoine center.

Because of defense needs, special arrangements have been made to accommodate 10 more medical students than customarily are admitted each September. The request for the increased quota was transmitted last summer from the government through the Association of American Medical Colleges.

The program for the medical group was in charge of the College's Student Council, and had been planned by the Council president, James Doty, 2417 Crane. Following a 1:00 p.m. auditorium program, the medical group toured college buildings and visited Receiving and St. Mary's hospitals and the Board of Health laboratories.

* * *

Arthur Humphrey, M.D., Battle Creek, 1941 M.S.M.S. Golf Champion

The 1941 Golf Tournament of the Michigan State Medical Society which was held over the beautiful and sporty Kent Country Club, Grand Rapids, on September 15, was won by Arthur Humphrey, M.D., of Battle Creek with a low of 83. Winner of the Championship Flight and second low of the field was George Slagle, M.D., also of Battle Creek. Doctor Humphrey was awarded the Penberthy Trophy for one year as well as the President's Trophy, the latter donated by P. R. Urmston, M.D., Bay City, president of the Michigan State Medical Society.

Harry F. Dibble, M.D., Detroit, copped the President-Elect's Prize donated by Henry R. Carstens, M.D., Detroit, with the low net score of the day.

C. F. Vale, M.D., Detroit, was the lucky winner of a Bulova wrist watch in the Kicker's Handicap. The prize was donated by Bill Mennen.

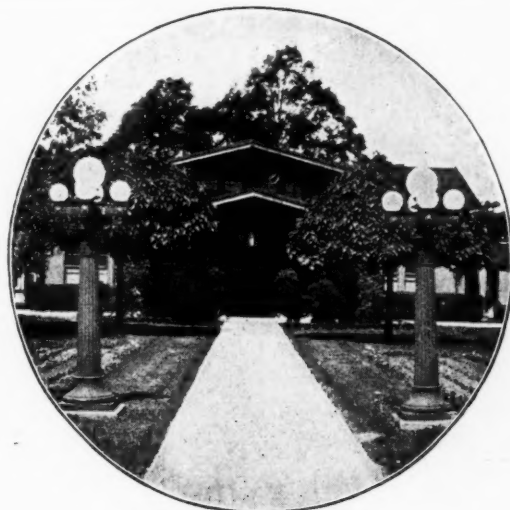
Other winners were R. J. Paalman, M.D., Grand Rapids, low net in the Championship Flight; A. M. Putra, M.D., Detroit, low gross in the First Flight; O. B. McGillicuddy, M.D., Lansing, low net in the First Flight; R. M. McKean, M.D., Detroit, low gross in the Second Flight; L. J. Morand, M.D., Detroit, low net in the Second Flight; A. J. Baker, M.D., Grand Rapids, low gross in the Third Flight; and Henry A. Luce, M.D., Detroit, low net in the Third Flight.

Don M. Howell, M.D., Alma, won the Maturity Event limited to members 50 years of age and over by shooting an 89. He took home the J. H. Dempster Trophy for one year's possession and the Treasurer's Prize donated by Wm. A. Hyland, M.D., of Grand Rapids. Robert C. Jamieson, M.D., Detroit, and R. H. Baribeau, M.D., Battle Creek, were runners up in the Maturity Event.

Second and Third Prizes in the Kicker's Handicap were won by A. E. Catherwood, M.D., Detroit and A. R. Dickson, M.D., Battle Creek.

M. J. Holdsworth, M.D., Grand Rapids, supervised arrangements for the tournament.

Additional prize donors were: A. S. Brunk, M.D., Chairman of The Council; O. D. Stryker, M.D., Speaker of the House of Delegates; L. Fernald Foster, M.D., Secretary; Roy H. Holmes, M.D., Editor of THE JOURNAL; H. H. Cummings, M.D., Vice Chairman of The Council; Wm. E. Barstow, M.D., Councilor of the Eighth District; W. H. Huron, M.D., Councilor of the Thirteenth District; A. H. Miller, M.D., Councilor of the Twelfth District; Vernor M. Moore, M.D., Councilor of the Fifth District; Wilfrid Haughey, M.D., Councilor of the Third Councilor District; Roy C. Perkins, M.D., Councilor of the Tenth Councilor District; E. F. Sladek, M.D., Councilor of the Ninth Councilor District; and Bill Burns, Executive Secretary.



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COUNTY SOCIETY NEWS

The Grand Traverse Leelanau-Benzie County Medical Society held its annual Summer Clinic at Munson Hospital, Traverse City, July 24-25, with an attendance of fifty physicians.

Frederick A. Collier, M.D., of Ann Arbor and Grover C. Penberthy, M.D., of Detroit, conducted operative clinics during both morning sessions. Both afternoons were devoted to lectures:

Frederick A. Collier, M.D., Ann Arbor: "War Surgery."

Cyrus C. Sturgis, M.D., Ann Arbor: "The Purpuric Anemias."

Carl E. Badgley, M.D., Ann Arbor: "The Sulfonamides in Compound Fractures."

Edgar A. Kahn, M.D., Ann Arbor: "Some Significant Neurological Signs in Everyday Medical Practice."

William G. Gordon, M.D., Ann Arbor: "The Use of Estrogenic Drugs in the Male."

Grover C. Penberthy, M.D., Detroit: "The Use of the Sulfonamides in Acute Osteomyelitis."

Issac A. Abt, M.D., Chicago: "Congenital Megacolon."

Following the Thursday evening banquet, Dr. Penberthy showed a movie on the "Treatment of Burns," and C. E. Boys, M.D., of Kalamazoo showed a movie on "Jaguar Hunting in Brazil."

Washtenaw County: S. W. Donaldson, M.D., Ann Arbor, addressed the Society on "The Physician's Civil Liability."

Following a historical introduction, the speaker discussed the physician's rights, privileges, responsibilities, and liabilities. Within this scope he defined and discussed the contract between patient and physician, the responsibility of both parties under the contract, and the mode of termination of this contract.

In a breach of this contract by the physician, a malpractice suit may be instituted. This suit is an action of tort or a civil wrong for which local redress can be rendered by the awarding of many damages and in which the law does not provide punitive action such as a fine or imprisonment against the offender.

The discussion of malpractice suits was further amplified by the consideration of a status of limitations (in Michigan it is two years), malpractice defense, and malpractice prophylaxis.

In a survey of 35,000 suits the following reasons in order of importance constituting 90 per cent of causes were given:

1. Inopportune remarks by subsequent attending physician.
2. Personal enmity and jealousy between members of the profession.
3. Counter suits as a defense against the suit brought by doctor for the purpose of collecting his fee.
4. Failure to use the x-ray with the diagnosis, and reduction of a fracture.

The rule of privileged communication was defined and thoroughly discussed. The importance of malpractice insurance was emphasized.

Because of the likelihood of all physicians to appear sometime in court, importance of evidence and testimony was stressed. The following suggestions were given for the prospective physician witness on the stand:

1. Before obligating yourself to testify as an expert, except in a malpractice suit against a physician, have a definite arrangement as to the fee.
2. Have a definite understanding of the merits of the case.
3. If you have never appeared on the witness stand, attend a few trials with the idea of hearing the medical testimony and attempting to see the point of view of the attorneys for both plaintiff and defendant.
4. On the witness stand be honest and sincere.

5. Be prepared. Expect anything on cross examination.
6. Be yourself.
7. Listen carefully to each question and be sure you understand it. If it is not clear ask that it be repeated.
8. If you do not know, say so. A frank answer, even though it is an admission of lack of knowledge, is better than a bluff.
9. Do not lose your temper. Be as courteous to the opposing counsel as you are to your own.
10. Do not volunteer testimony. Remarks which are not necessary in answers to questions are liable to bring forth objections that the testimony is irrelevant or to give the impression that the witness is partisan. If you are serving as an ordinary witness, give only the facts and state them clearly and concisely. If called as an expert you are expected to render an opinion.
11. Talk loudly enough to be heard. The judge, the jury, the court stenographer and the attorneys must hear everything you say. Speak directly to the jury, as they especially need to know what you have to say. If there is no jury, direct your remarks to the judge.
12. Do not "play up to the spectators." Try to act as if you were in your own office discussing the case with the attorney who summoned you.

READING NOTICES

ARMY RECOGNIZES CANNED FOOD MANUAL

Recognition by the Quartermaster General in Washington was recently given to the "Canned Food Reference Manual." The American Can Company was authorized to send copies of the manual to the Commanding General and the Quartermaster at each Corps Area Headquarters; one to the Medical Officer and the Quartermaster at each of the Posts, Camps and Stations of the Army; and one to the Commanding Officer at the various Purchasing Depots of the Army throughout the country.

PRESERVED BLOOD PLASMA

The stimulus of war has aroused great interest in substitutes for whole blood, and many intensive investigations are being undertaken in this field both from the laboratory and clinical standpoints. The indications for intravenous administration of blood plasma, such as in shock without hemorrhage, in burns, for administration of antibodies and for the maintenance of plasma protein, and even severe hemorrhage, are now rather definite.

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REDUCTION IN RATES ANNOUNCED

The Physicians Casualty Association of America has made a reduction in the \$25.00 per week accident and health insurance, of \$1.00 per year; in the \$50.00 per week accident and health insurance, of \$2.00 per year, and in the \$75.00 per week accident and health insurance, of \$3.00 per year.

SCHERING'S NEW SULFONAMIDE NOW AVAILABLE FOR R USE

Sulfacetimide, a new and potent derivative of sulfanilamide, is to be marketed under the trade name Sulamyd by the Schering Corporation, Bloomfield, New Jersey.

Sulfacetimide was highly praised at the recent meeting of the American Medical Association in Cleveland as "almost a specific for the treatment of B. coli infections of the urinary tract." The new drug is also potent in the treatment of gonorrhea and other urinary tract infections. Sulfacetimide is considered less toxic than the sulfonamide preparations now available.

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Acknowledgment of all books received will be made in this column and this will be deemed by us as a full compensation of those sending them. A selection will be made for review, as expedient.

OUTLINES OF INDUSTRIAL MEDICAL PRACTICE. By Howard, E. Collier, M.D. (Edin.) Ch.B., Formerly Reader in Industrial Hygiene and Medicine, University of Birmingham. Certifying Factory Surgeon, Etc. A William Wood Book. Baltimore: The Williams & Wilkins Company, 1941. Price: \$5.00.

While Industrial Hygiene in Great Britain apparently is not so well defined as in the United States the intimate details of this English book make it well worth while. The material is recommended to all physicians who have more than a passing interest in Industrial Health.

* * *

CEREBROSPINAL FEVER. By Denis Brinton, D.M. (Oxon), F.R.C.P. (Lond.). Physician in Charge of the Department for Nervous Diseases, St. Mary's Hospital, London; Assistant Physician to Out-Patients, National Hospital for Nervous Diseases, Queen Square, London; Physician to the Royal London Ophthalmic (Moorfield) Hospital, London; Consultant Neurologist to the London County Council. A William Wood Book. Baltimore: The Williams & Wilkins Company, 1941. Price: \$3.00.

The English view point of the "Universal Disease." Emphasis is placed on the use of sulfonamides. The only plates are four, and they are of sulfonamide rashes. It is an interesting and instructive monograph.

* * *

ESSENTIALS OF DERMATOLOGY. By Norman Tobias, M.D., Senior Instructor in Dermatology, St. Louis University; Assistant Dermatologist, Firmin Desloge and St. Mary's Hospitals; Visiting Dermatologist, St. Louis City Sanitarium and Isolation Hospital. Philadelphia: J. B. Lippincott Company, 1941. Price: \$4.75.

For the general practitioner and the medical student the author presents in a simple fairly complete manner all of the common skin ailments and most of the rarer dermatoses. The treatment has been simplified and is easily followed. Most of the pictures are new and descriptive. It is surprising how the author has included so much information in a small volume. It is recommended for the general practitioner.

* * *

THE AMERICAN ILLUSTRATED MEDICAL DICTIONARY. A complete Dictionary of the Terms Used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Nursing, Veterinary Science, Biology, Medical Biography, etc., with the Pronunciation, Derivation, and Definition. By W. A. Newman Dorland, A.M., M.D., F.A.C.S.; Lieut.-Colonel, M.R.C., U. S. Army; Member of the Committee on Nomenclature and Classification of Diseases of the American Medical Association; Editor of "American Pocket Medical Dictionary." Nineteenth Edition, revised and enlarged with 914 illustrations.

THE DOCTOR'S LIBRARY

tions, including 269 portraits. With the collaboration of E. C. L. Miller, M.D., Medical College of Virginia. Philadelphia and London: W. B. Saunders Company, 1941. Price: Plain, \$7.00; Thumb-Indexed, \$7.50.

This is the nineteenth edition of a volume first published in 1900. In this edition more than two thousand new words have been added. There are well over a hundred tables and several hundred portraits besides the usual dictionary features. This is the dictionary in which the editorial department of the American Medical Association coöperates. The typography and binding are very good.

* * *

MODERN MARRIAGE. A Handbook for Men. By Paul Popenoe, General Director, the American Institute of Family Relations, Los Angeles, Calif.; Lecturer in Biology, University of Southern California. Second Edition. New York: The MacMillan Company, 1940. Price: \$2.50.

Popenoe is a Lecturer in Biology and approaches the subject of marriage from the biological point of view. An entire chapter is devoted to proposals including a table of the number of proposals the average woman of a certain age group receives. The volume should be of some value to the physician who wishes some means of informing the young man who is serious about the whole thing.

* * *

MANUAL OF THE DISEASES OF THE EYE. For Students and General Practitioners. By Charles H. May, M.D., Consulting Ophthalmologist to Bellevue, Mt. Sinai and French Hospitals, New York; Formerly Chief of Clinic and Instructor, in Ophthalmology, Medical Department of Columbia University, and Director of the Eye Service at Bellevue Hospital, New York. Seventeenth Edition, Revised with the assistance of Charles A. Perera, M.D., Associate in Ophthalmology, College of Physicians and Surgeons, Medical Department of Columbia University, New York; Asst. Attending Ophthalmologist, Presbyterian Hospital, New York. With 387 illustrations including 32 plates, with 93 colored figures. Baltimore: William Wood and Company, 1941. Price: \$4.00.

William Wood and Company presents the seventeenth edition of May's "Manual of the Diseases of the Eye" originally published in 1900. This standard textbook includes appropriately, an appendix giving the ocular requirements for admission to the Army, Navy, Marine and Air Service in the United States. The changes necessitated by recent advances in this subject in the last two years have been added and some parts have been rewritten. This book provides an excellent reference for the general practitioner who needs assistance in common ophthalmological conditions.

* * *

NECROPSY. A Guide for Students of Anatomic Pathology. By Bela Helpart, M.D., Assistant Professor of Pathology and Bacteriology, Louisiana State University School of Medicine, and Visiting Pathologist, Charity Hospital of Louisiana at New Orleans. St. Louis: The C. V. Mosby Company, 1941. Price: \$1.50.

This is a handy practical protocol which cannot help but produce a valuable autopsy if the outline and suggestions of the author are followed.

* * *

ABDOMINAL SURGERY OF INFANCY AND CHILDHOOD. By William E. Ladd, M.D., F.A.C.S., William E. Ladd Professor of Child Surgery at Harvard Medical School; Chief of Surgical Service, The Children's Hospital, Boston; and Robert E. Gross, M.D., Associate in Surgery, the Harvard Medical School; Associate Visiting Surgeon, The Children's Hospital; Associate in Surgery, The Peter Bent Brigham Hospital, Boston. Philadelphia and London: W. B. Saunders Company, 1941. Price: \$10.00.

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in this field. This volume deals with abdominal surgery of this age group and is well illustrated with line drawings and cuts and discusses informatively the variations which are found in children. For the pediatrician and the surgeon this book should be of considerable importance and to the general practitioner, of value.

* * *

Annual Reprints of the Reports of the COUNCIL ON PHARMACY AND CHEMISTRY of the American Medical Association for 1940. With the comments that have appeared in THE JOURNAL. Chicago: American Medical Association, 1941. Price: \$1.00.

The American Medical Association has published this small volume giving the reports of the Council on Pharmacy and Chemistry together with the comments which have appeared in *The Journal of the A.M.A.* For a permanent reference of the truth on new drugs this book is recommended to all physicians.

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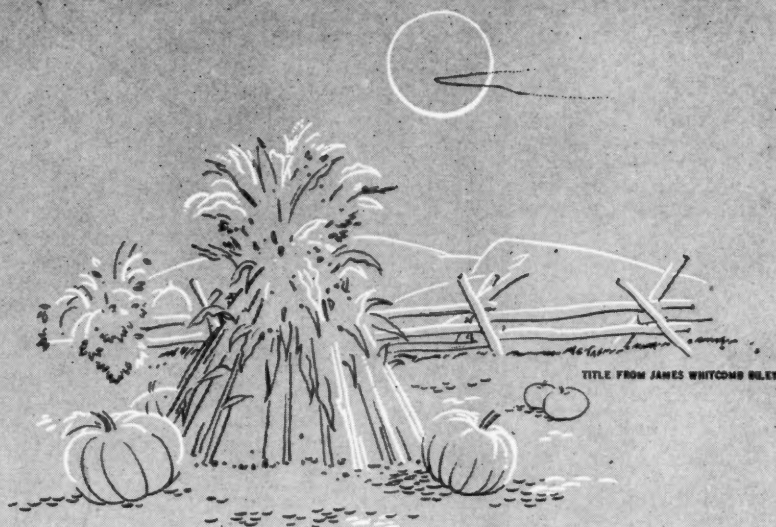
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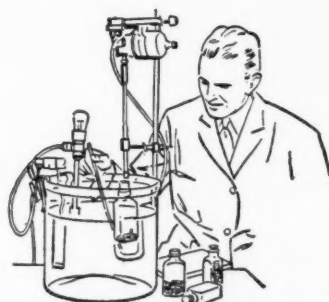
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- 1 Elvehjem, C. A. — Nutritional Requirements of Man — Ind. & Eng. Chem., June 1941.
- 2 McCollum, E. V. — The Newer Knowledge of Nutrition — 5th Ed., 1939, p. 392.
- 3 McLester, J. S. — Nutrition and Diet in Health & Disease — 3rd Ed., 1939, p. 91.
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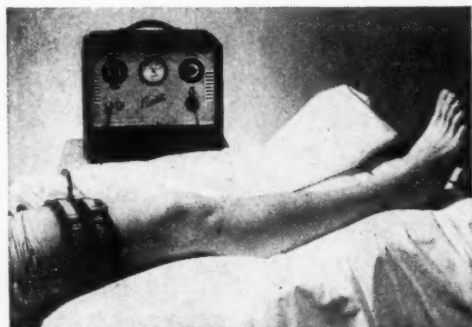
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The present Board of Directors includes a full representation of the medical profession by Councilor Districts. Likewise, as provided in the governing law, proper representation is given to the public through lay members.

Points of Information

Two phases of the operation of Michigan Medical Service are of particular interest: (1) Why is there some delay in making payments to doctors; (2) Why was the pro ration necessary.

Why Some Delay in Making Payments to Doctors.—The majority of Service Reports received by the tenth of the month following the month of service are approved by the Medical Advisory Board for payment by the fifteenth of the month. Checks are then drawn so that payments are received by doctors before the thirtieth of the month following the month of service.

The chief reason for any delayed payment is late reporting of services by the doctor's office. At least 40 per cent of the service reports are received one or more months late. Many of the reports received are incompletely filled out or do not present sufficient information to identify the patient as a subscriber. Consequently, there may be delay in ascertaining whether the patient is eligible for services and in having the report approved for payment.

In a small percentage of the cases there may be some delay because of a precedent type of service which necessitates the obtaining of special information through the Medical Advisory Boards or other committees before appropriate payment can be authorized.

At the meeting in Grand Rapids, there was a general session for doctors' office secretaries to acquaint them with the procedures for billing Michigan Medical Service. Outlines of the arrangements for billing have been distributed widely. Prompt payment will be facilitated if the



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• *The name is never abbreviated; and the product is not like any other infant food—notwithstanding a confusing similarity of names.*

The fat of Similac has a physical and chemical composition that permits a fat retention comparable to that of breast milk fat (Holt, Tidwell & Kirk, *Acta Paediatrica*, Vol. XVI, 1933) . . . In Similac the proteins are rendered soluble to a point approximating the soluble proteins in human milk . . . Similac, like breast milk, has a consistently ZERO curd tension . . . The salt balance of Similac is strikingly like that of human milk (C. W. Martin, M. D., *New York State Journal of Medicine*, Sept. 1, 1932). *No other substitute resembles breast milk in all of these respects.*



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NOVEMBER, 1941

Say you saw it in the Journal of the Michigan State Medical Society

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doctor will see that his office carries out the following simple procedures:

- (a) Send the Initial Service Report immediately when services are first requested, entering the correct name, address and certificate number of the patient and designating the services required. Failure to send the Initial Service Report immediately will delay authorization of payments. If the Initial Service Report is not sent promptly, there is no need to send this report along with the Monthly Service Report.
- (b) Send the Monthly Service Report, designating the exact services rendered and indicating the patient's name and certificate number, not later than a few days following the month during which services were rendered.

Monthly Service Reports should be sent for services rendered during each month.

The office personnel and procedures of Michigan Medical Service are constantly improving and doctors may expect that reports sent in on time will be paid promptly. If your report is not paid promptly, do not send another Monthly Service Report; simply send a letter giving the full name of the patient and the date of services, with a request that payment be remitted.

Why Was Proration Necessary?—After payment of the full Schedule of Benefits for thirteen consecutive months, the combination of a greatly increased volume of services and late reporting on the part of the doctors made it necessary to pay on a prorated basis of 80 per cent until a determination could be made of the cost of services for the particular month compared with the income from subscribers. This determination can be made only when all late reports are received, which means after a period of at least 90 days following the month of services, during which time reports may be authorized for payment. It is recognized that the prorated payments are tentative and that the reduced amount is an obligation that will be repayable to the doctors out of surpluses that may be accumulated.

It is also believed that the prospects for repayment are favorable. An analysis of groups that have been enrolled for twelve months indi-

cates that the income is more than sufficient to cover the cost of services and administration expense. During the first five months of enrollment there is a large volume of services required for the correction of pre-existing conditions such as female pelvic disorders, hernias, appendectomies, and tonsillectomies. In subsequent months, costs of services are less. Experience records also show that one-half of all appendectomies and tonsillectomies required by a group of subscribers will be performed during the first few months of enrollment.

In addition to the improved financial status for groups enrolled longer than five months, the present season of the year from September to January is a period of lower utilization of services.

Harper Hospital Bulletin, a new publication by members of the Harper Hospital Staff, Detroit, Michigan, will appear monthly from October to June. Members of the profession may obtain copies of the *Harper Hospital Bulletin* by addressing The Editor, 3825 Brush Street, Detroit, Michigan.

The Editorial Board consists of the following:

Editor in Chief—Harold C. Mack, M.D.

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A. Yes, it is. A four-ounce serving of canned salmon contains approximately 200 to 800 U.S.P. units of vitamin D-2. The body oils of sardines approach a good cod liver oil in vitamin A and D potencies. Therefore, canned sardines are another important dietary source of vitamin D.⁽¹⁾ It has been reliably estimated that the amount of canned salmon sold in this country alone contains more vitamin D than the cod liver oil used for both animal and human feeding.⁽²⁾

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⁽¹⁾ 1935. J. Home Econ. 27, 658.

⁽²⁾ 1931. Ind. Eng. Chem. 23, 1066.



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HALF A CENTURY AGO



THE NEED FOR A BETTER STUDY OF DISEASES OF THE SKIN*

W. F. BREAKEY, M.D.

Ann Arbor, Michigan

It is not claimed that this paper presents ideas especially original or new in matter or form; and the principal excuse, if not justification, it can have is the, perhaps, presumptuous opinion that there is still need for repetition of effort to rescue from quackery a branch of medicine too much given over to the charlatan and to encourage more study of it by the general practitioner, as alike beneficial to his patients, creditable to medical science, and profitable to himself. If it be the means of encouraging any practitioner to more thorough investigation and successful treatment of a class of cases that have been too much the opprobrium of medicine, it will not be wholly in vain.

Its exterior position, great area, and peculiar functions, make the skin an important organ from a hygienic point of view. From a pathological and therapeutical standpoint, the importance of a knowledge of the diseases of the skin, to the general practitioner of medicine, is so obvious as not to need argument.

Considering the extent of surface of the skin, the wonderful adaptability to the successful performance of its varied and important functions, its protection to subjacent tissues, while it is also the principal terminus of sensory nerves, serving also as a great eliminator and emunctory; its tolerance of heat and cold; its exposure to injuries, to atmospheric and other poisons and irritants, by contact, by textures and colors of clothing, by its lack of care, and by mal-medication; to say nothing of parasitic, inherited, or exanthematous diseases—when we consider these and many unmentioned risks, it is not strange that the skin is the seat of such a variety of diseases.

It is the medium through which external influences act on the body, and the channel by which many communicable diseases find their way to other organs and tissues. Beside the diseases to which its own tissues are subject, its conditions often furnish indications of disease of other organs. It will be generally conceded by the average medical man that while modern medical science has taught us much of the structure and function of the skin, we have not made corresponding progress in the hygienic care or successful treatment of its diseases.

Indeed, it is only stating it moderately to say, that the whole field of diseases of the skin and its appendages, has been too much neglected by the general practitioner. This, however, is not wholly his fault, as the colleges, also, until within a very few years, have given students very insufficient instruction and facilities for the study of dermatology.

And the people who are too prone, at best, to trust themselves to advisers who promise the most—even if irresponsible—in these cases are furnished an excuse for patronizing quackery, by reason of the failure of the general practitioner to give them sufficient attention.

It is curious that while some practitioners seem to have thought it too difficult for the ordinary physician, others have regarded it as too trivial to study the pathology of diseases of the skin. Others too, have underrated the importance of these cases, because so

many of them do not endanger life, and are often found in persons of otherwise good health. But it should be remembered that many disorders of the skin, which appear slight, may cause much distress to those afflicted; others are important or serious because of their bearing upon the general health and usefulness of the sufferers and their friends. Some are attended with much irritation and pain. Many cases cause great disfigurement, and are regarded with a sort of instinctive abhorrence. There is a tendency in the popular mind to classify all unsightly diseases of the skin as communicable. Thus the subjects of innocent cases of acne, eczema, and psoriasis are sometimes shunned as lepers, or subjected to suspicion of having inherited or acquired a disease in some way discreditable to their morals, while less conspicuous but genuine cases of syphilis go unchallenged and unguarded. And this popular misconception is often strengthened by erroneous or thoughtless professional opinion.

The supposed difficulties of a successful study of skin diseases have been exaggerated, by the idea that the pathology was different from that of other tissues. Hillier wrote 25 years ago that, "Probably no class of diseases was less understood," and other authors, foreign and American, have, in one way and another, repeated the statement later. Prominent among the causes of this difficulty is the great diversity of names which have been given to diseases of the skin, by different authors, some diseases having several different names, and the same name having been given to diseases totally distinct from each other. Even the same writer has given new names to diseases described previously by himself under other names! And, as if this was not enough to confuse, the difficulties were further increased by "endless varieties of classification and extreme subdivision," "the same disease being given different names, from the different appearances presented in different stages of its progress, or variations in severity," etc.

As indicating progress, Fox (F.S.), writing 15 years later than Hillier, says as to the general character of skin diseases: "There is nothing especially in the pathological changes occurring in the tissues in these disorders;"

That the idea of the student that he is about to encounter a "new set of pathological phenomena" is not true;

That (then) recent researches in cutaneous pathology have cleared the way to a more correct knowledge of the changes taking place in the skin in disease, and as a consequence, it is becoming more and more apparent, that these morbid processes are identical with those occurring elsewhere in the body. And it is still more noteworthy and satisfactory now than then, that the student of today who is compelled to acquire pathological knowledge over so wide a field, is beginning to discover that his study of skin diseases is rendered comparatively easy, because of the complete similarity which has now been demonstrated between the facts of general and skin pathology.

As Taylor so aptly states, it will therefore be seen that skin diseases are intimately allied to the general

(Continued on Page 856)

*Presented at the twenty-sixth annual meeting of the Michigan State Medical Society at Saginaw in 1891.

"SEE YOUR DOCTOR!" Reproduced below is Number 171
of a series of full-page advertisements published by Parke, Davis & Co.
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The man who nearly died . . . from a few kind words

BYOND THAT DOOR lies a very sick man. True, his doctor says he is going to pull through. But he has come mighty close to paying a tragic price for a few words of free advice from a well-meaning friend.

When he complained of a nagging pain in his abdomen, his friend said: "You've probably eaten something that's poisoned you. Here's what I'd do . . ."

So he promptly followed his friend's suggestion and took a cathartic. And in a matter of hours he was being rushed by ambulance to the hospital . . . with a ruptured appendix.

His friend, of course, had acted from the kindest of motives. But he didn't know that an abdominal pain might mean acute appendicitis, in which case a cathartic should never be taken.

Unfortunately, appendicitis is only one of many illnesses where amateur medical advice can result in tragedy. Yet, human nature being what it is, many people just can't resist the temptation to offer advice when a friend is sick.

Intelligent medical treatment depends upon various factors which only a physician is qualified to evaluate. When something

seems wrong with you, it is the part of wisdom to observe this common-sense rule: Take a friend's advice about buying a radio, a car, or even a home if you wish; but don't let him advise you about your health.

Don't let a friend who *means* well tell you how to *get* well. To get well, and *keep* well, the man to see is your physician.

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NOVEMBER, 1941

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COUNTY AND DISTRICT MEETINGS

COUNTY MEDICAL SOCIETY MEETINGS

Bay—Wednesday, October 8, 1941—Bay City—*Berrien*—Wednesday, August 13, 1941—Benton Harbor—Speaker: LeMoyne Snyder, M.D., Lansing. Subject: "Scientific Investigation of Evidence." Thursday, September 25—Benton Harbor—Speaker: C. S. Scuderi, M.D., Chicago. Subject: "Treatment of Compound Fractures." Wednesday, October 15—Niles—Speaker: Carl Langenbahn, M.D., South Bend, Indiana. Subject: "Surgical Aspects of Hematuria."

Calhoun—Tuesday, September 9, 1941—Battle Creek—Speaker: Walter Schiller, M.D., Chicago. Subject: "New Aspects in Relation to Pathology of Ovarian Tumors." Tuesday, October 7, 1941—Battle Creek—Speaker: Herman H. Riecker, M.D., Ann Arbor. Subject: "Classification and Management of Hypertension."

Delta-Schoolcraft—Wednesday, October 29, 1941—Escanaba—Speaker: M. Cooperstock, M.D., Marquette. Subject: "Care of the Premature Baby."

Dickinson-Iron—Thursday, September 4, 1941—Iron Mountain.

Ingham—Tuesday, September 9, 1941—Lansing—Speaker: LeMoyne Snyder, M.D., Lansing. Subject: "Medical Evidence."

Ionia-Montcalm—Tuesday, October 14, 1941—Lake Odessa—Speaker: Leland M. McKinley, M.D., Grand Rapids—Subject: "Newer Concepts and Treatment of Shock."

Kalamazoo—Tuesday, October 21, 1941—Fort Custer—Program by medical officers at Fort Custer.

Kent—Tuesday, October 14, 1941—Grand Rapids—Speaker: A. C. Corcoran, M.D., Indianapolis. Subject: "Recent Advances in the Study of Hypertension."

Marquette-Alger—Tuesday, September 30, 1941—Marquette—Speaker: Frank V. Theis, M.D., Chicago. Subject: "Diagnosis and Treatment of Peripheral Circulatory Disturbances."

Muskegon—Friday, September 19, 1941—Muskegon—Speaker: H. Ivan Sippey, M.D., Chicago. Subject: "Gastro-Intestinal Disorders." Friday, October 17—Muskegon—Program of medical motion pictures.

Northern Michigan—The Northern Michigan Medical Society adopted the following resolution at its August meeting:

"WHEREAS, Schedule A represents the lowest schedule of fees that physicians can work under (i.e., cost price or one-half regular fees;

"AND WHEREAS, In the past the members of the Northern Michigan Medical Society have done county and state work at less than cost prices;

"AND WHEREAS, Federal governmental agencies during the present emergency are demanding more and more work from physicians without compensation, necessitating that they be paid at least cost price for county and state work;

"AND WHEREAS, the rising costs of living, medicines, salaries, et cetera, have increased the physicians' expense in delivering service;

"BE IT RESOLVED, That the members of the Northern Michigan Medical Society hereby notify the Social Welfare Boards of the counties of Emmet, Cheboygan, Charlevoix, and Antrim that, starting September 15, 1941, Schedule A of 1937 as outlined by the Michigan Crippled Children Commission will be the minimum fees at which services will be performed for the county Social Welfare Boards."

Shiawassee—Thursday, October 16, 1941—Owosso—Speaker: J. M. Brandel, M.D., Owosso, will present and discuss motion picture on electrocardiography.

Washtenaw—Tuesday, October 14, 1941—Ann Arbor—Speaker: Otto Engelke, M.D., Ann Arbor. Subject: "Washtenaw County Health Unit."

Wayne—Monday, October 6, 1941—Detroit—Speaker: D. W. Gordon, Murray, M.D., Toronto. Subject: "The Use of Heparin in Blood Vessel Surgery and Throm-

bosis. Monday, October 20—Detroit—General Practice Meeting. Joint session with Detroit Dermatological Society; round table on dermatology. Monday, October 27—Detroit—Speaker: Michael L. Mason, M.D., Chicago. Subject: "Significant Factors in the Development of Infections of the Hand." Monday, November 10—Detroit—Speaker: Ernest E. Irons, M.D., Chicago—Subject: "Aspiration Pneumonia." Monday, November 24—Detroit—Surgical Meeting. Speaker: Frederick A. Collier, M.D., Ann Arbor

West Side (Wayne)—Wednesday, October 15, 1941—Detroit—Social meeting for doctors and their wives.

MSMS DISTRICT MEETINGS IN FULL SWING

The following Councilor District meetings have been arranged or already have been held: Seventh District at Marlette on October 14, T. E. DeGurse, M.D., Councilor. Other officers attending included Council Chairman A. S. Brunk, Detroit; Speaker P. L. Ledwidge, Detroit; Secretary L. Fernald Foster, Bay City; and Executive Secretary Wm. J. Burns.

The *Tenth District* met at Grayling on October 21, Roy C. Perkins, M.D., Councilor. MSMS officers attending included W. E. Barstow, M.D., St. Louis; E. F. Sladek, M.D., Traverse City; Secretary Foster and Executive Secretary Burns.

The *Third District* met at Battle Creek on October 28, Wilfrid Haughey, M.D., Councilor. MSMS officers included President H. R. Carstens, M.D., Detroit; Vernor M. Moore, M.D., Grand Rapids; R. J. Hubbell, M.D., Kalamazoo; Secretary Foster and Executive Secretary Burns.

The *Eighth District* met at St. Louis on November 6. W. E. Barstow, M.D., is Councilor. Officers who attended include President H. R. Carstens, M.D., Detroit; Councilors Roy C. Perkins, M.D., Bay City and Ray S. Morrish, M.D., Flint; and Secretary Foster and Executive Secretary Burns.

The *Fourteenth District* is scheduled for November 11 at Ann Arbor, L. J. Johnson, M.D., Councilor. Attending officers will include President Henry R. Carstens, M.D., Detroit; President-Elect Howard H. Cummings, M.D., Ann Arbor; Speaker P. L. Ledwidge, M. D., Detroit; and Secretary Foster.

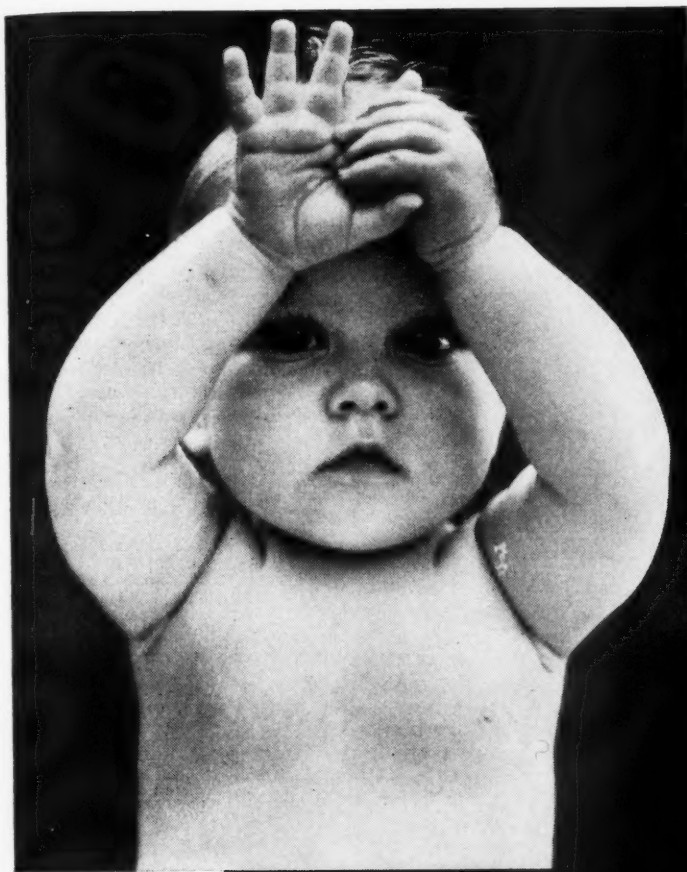
The *Fifth District* is also scheduled for November 11, but at Grand Rapids. Vernor H. Moore, M.D., is Councilor. Officers who will attend this meeting include Wilfrid Haughey, M.D., Battle Creek; Editor Roy H. Holmes, M.D., Muskegon; R. J. Hubbell, M.D., Kalamazoo; Council Chairman Brunk and Executive Secretary Burns.

The *Eleventh District* plans to meet in Muskegon on November 21. Roy H. Holmes, M.D., is Councilor. Attending officers will include Council Chairman A. S. Brunk, Councilors Vernor M. Moore, and Wilfrid Haughey, Secretary Foster and Executive Secretary Burns.

The *Ninth District* will meet in Traverse City on December 5 with Councilor E. F. Sladek, presiding. Officers at this meeting will include President Henry R. Carstens, M.D., Detroit; Editor Roy H. Holmes, Muskegon; Councilors Barstow and Perkins, Secretary Foster and Executive Secretary Burns.

The *Fourth District* will meet in St. Joseph on December 17. R. J. Hubbell, M.D. is Councilor. Visiting officers will be Councilors V. M. Moore, Wilfrid Haughey, Vice Speaker George H. Southwick of Grand Rapids, Secretary Foster and Executive Secretary Burns.

The 1941 District Meetings are being conducted as "discussion conferences" with the following important subjects forming the basis for most of the discussion: (a) Michigan Medical Service, (b) The M.S.M.S. JOURNAL, (c) County Society Meetings, (d) County Health Units, (e) Ethics, (f) Medical Welfare.



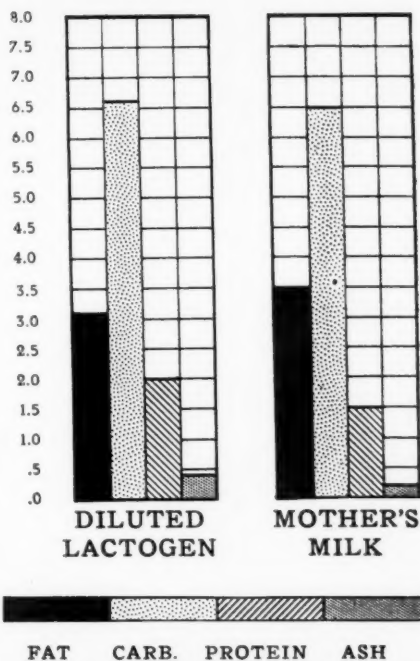
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Clinical Pediatrics, p. 156.



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READERS' SERVICE

CARCINOMA OF THE STOMACH WITH PARTICULAR REFERENCE TO DIAGNOSIS AND RESULTS

The only hope for cure of gastric cancer resides in recognition of the disease at a sufficiently early stage to permit its surgical removal. The means whereby this disease can be recognized, at this stage, when the opportunity is presented, are within the means of us all, namely, a carefully taken history, a clear appreciation of the symptoms which may be produced by early cancer in the stomach, and insistence on competent roentgenologic diagnosis of the stomach in any case in which gastric cancer is even faintly suspected. In addition, an accurate differential diagnosis of any gastric lesion which either may be or might become carcinomatous is essential. The benefit of exploratory laparotomy should be given to any patient who has gastric cancer, when there is even a small chance that the lesion might be removed, unless obvious metastasis already is present. Approximately one-third of the patients who have gastric resection performed for carcinoma of the stomach and survive the operation will live for five or more years following removal of the growth. Although the ultimate prognosis of gastric carcinoma is not bright, by increasing effort and diligence on the part of the medical profession it is hoped that end results gradually may be improved.—JAMES T. PRIESTLEY, M.D., Rochester, Minn. (See page 867.)

EFFECT OF ORAL ADMINISTRATION OF DIETHYLSTILBESTROL ON MENOPAUSAL SYMPTOMS

The literature on diethylstilbestrol is reviewed briefly. The author stresses the fact that adequate therapeutic effect in the majority of menopausal patients can be obtained from small doses of diethylstilbestrol equivalent to 0.5 mg. three to seven times weekly. The clinical results are similar to those following the administration of the natural estrogens. Toxic effects appeared in about 7 per cent of the series of thirty patients treated. He gauged the efficiency of the drug on subjective evidence alone, the relief of flushes, rather than the objective evidence as vaginal and endometrial biopsies and vaginal smears.—J. WM. PEELEN, M.D., Kalamazoo. (See page 873.)

THE MODERN TREATMENT OF TRAUMATIC SHOCK

The modern treatment of traumatic shock resolves itself into a critical evaluation of the clinical pathological processes taking place which tend to cause a disparity between the volume of blood and the volume capacity of the vascular tree. This disparity results from the reciprocal effects of two major factors as demonstrated by Moon: Capillary atony and tissue anoxia; either of these factors will cause development of the other and this reciprocal reaction gives a self-perpetuating and irreversible circulatory deficiency. Oligemia, hemoconcentration, exemia, anoxemia, acarbica, acapnia, hyperhydria and hyperpotassiumemia are evidences of the disturbed physiology which can be corrected by the immediate and intelligent administration of blood plasma, pectin, adrenal cortex hormone, concentrated oxygen; opium derivatives and external heat are adjunct therapeutic measures.—HENRY A. HANELIN, M.D., Marquette. (See page 876.)

END-TO-END ANASTOMOSIS: MATHEMATICAL APPROACH TO THE CAUSES OF MARGINAL GANGRENE

By mathematical analysis is shown that the cut surfaces of the bowel lumina, which are to be united by the usual technique of end-to-end anastomosis, do not lie in a plane but in a hypoid curve. This curve permits determination of the relative tension in all parts of the suture line; the maximum tension being located always contramesenterially, where pathologists find almost all marginal gangrenes. It is suggested to cut the bowel by a method calculated to undo the hypoid.—A. H. MOLLMAN, M.D., Grand Rapids. (See page 882.)

EXPERIENCES IN PREMARITAL COUNCIL IN PRIVATE PRACTICE

The purpose of the paper is to give in outline the general point of view acquired from efforts to meet the increasing demand for premarital examination and advice. The somewhat uncertain and unsatisfactory results often obtained show the lack of satisfactory knowledge on the subject and the need to give more time and consideration to premarital examinations. Girls should be urged to come early rather than late for premarital council, as the most effective service often extends over a period of weeks. Contraceptive advice is given, but planned parenthood is urged as soon as seems possible to both husband and wife. If the schools and colleges were to give adequate education on the subjects of sex and marriage, it would leave the doctors more time for the technical services which give the patients the treatment and reassurance that they need.—RICHARD N. PIERSON, M.D., New York. (See page 884.)

HALF A CENTURY AGO

(Continued from Page 852)

domain of medicine and surgery, and should be studied, not in a narrow and special manner, but in the broad light of pathology and medicine. And it is one of the important signs of progress in dermatology that today the morbid changes in the skin are almost universally admitted to be, in very many instances, more or less intimately associated with, if not the expression of, deranged systemic conditions.

It is comparatively easy to become familiar with the dermal affections of external origin. The greatest difficulty will be found in determining the etiological factor in cases in which external irritation plays little or no part. Yet with the increased knowledge of general pathology, the improved processes, and facilities for investigation, patient effort and persistent trial will discover causes, sometimes obscure, or overlooked by hasty examination, on which a diagnosis can be made that goes a long way to ensure successful treatment.

It follows, then, that the general practitioner, who, by his knowledge of general pathology, is prepared to diagnose, of necessity should also be well equipped for the treatment of these cases.

They may not be so numerous in every locality as to furnish a full clinical assortment, but enough will be found to illustrate many varieties of dermal diseases, and no class of cases will better repay a careful study in etiology, pathology and therapeutics, local and general.

Nearly all are amenable to treatment. No patients are more grateful than those relieved of deformities or disfiguring diseases. Many of the most unpromising will be found less intractable than they appear, and to yield to appropriate treatment, while the hopelessly incurable cases, will give credit for accuracy in prognosis, even if it be unfavorable.

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SERUM SICKNESS used to be a serious obstacle to the successful application of serotherapy. So great was the fear of these reactions that at times the patient was even deprived of life-saving treatment.

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NOVEMBER, 1941

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857

CONVENTION NOTES

CONVENTION NOTES

Michigan newspapers gave 1208 inches in their news columns, and 70½ inches in their personal columns—a total of 1278½ inches of space—to the MSMS 76th Annual Convention, or 11,506½ lines!!! A number of these stories were first page—and this despite war, politics, and pretty girls.

* * *

The larger cities of Michigan were represented at the 1941 Grand Rapids Convention as follows: Ann Arbor, 30; Battle Creek, 35; Bay City, 13; Detroit, 201; Flint, 51; Grand Rapids, 194; Holland, 12; Jackson, 28; Kalamazoo, 56; Lansing, 76; Monroe, 7; Mt. Clemens, 2; Pontiac, 12; Muskegon, 52; Port Huron, 7; Saginaw, 35 and Sault Ste Marie, 6. The balance of those registering came from towns and villages in all parts of the state.

* * *

Three Grand Rapids service clubs were addressed by representatives of the Michigan State Medical Society on the occasion of the 1941 MSMS Convention.

Wilfrid Haughey, M.D., of Battle Creek addressed the Kiwanis Club on "Medical Progress," Monday, September 15; L. Fernald Foster, M.D., Bay City, spoke to the Lions Club concerning "Michigan Medical Service" on Tuesday, September 16; and Howard H. Cummings, M.D., of Ann Arbor addressed the Rotary Club on "Postgraduate Medical Education," Thursday, September 18.

* * *

M. M. Ricketts, Sales Manager of Petrogalar, flew from Philadelphia to Grand Rapids, to attend the MSMS Convention. After spending a day in Grand Rapids, Mr. Ricketts returned by plane to Philadelphia.

Ted Lewis of Johnson & Johnson came to Grand Rapids from New Brunswick, N. J. to view the MSMS Technical Exhibit.

* * *

Rubber stamps were used by at least six physicians who roamed through the exhibits stamping their signatures at the various booths!!!

* * *

Speaking of dispensing: Coca-Cola distributed 3,360 bottles at the 1941 MSMS Convention; R. B. Davis Company served 1,027 glasses of hot and cold Cocomalt; Philip Morris Company sampled the 2,117 registrants with 9,000 cigarettes; the Mennen Company distributed 757 bottles of oil and an equal number of cans of borated powder; the H. J. Heinz Company dispensed 716 servings of tomato juice; the John Wyeth & Brother Company had 448 customers for their liquid BeWon; the Kalak Water Company found 587 thirsty customers; and Pet Milk distributed 3,507 miniature Pet Milk cans.

Incidentally, 1,280 glasses of beer were enjoyed at the MSMS Smoker of September 18 (and that's quite an incidental).

* * *

The American Society for the Control of Cancer, Women's Field Army, entered a scientific exhibit at the MSMS Convention. This interesting display was manned by Frank L. Rector, M.D., Field Representative in Cancer for the MSMS Cancer Control Committee, as well as by representatives of the Women's Field Army of Michigan.

What some of the guest essayists had to say about the 1941 MSMS Convention:

S. Wm. Becker, M.D., Chicago: "I believe that the program presented was one of the best, if not the best, I have ever seen at a state meeting."

* * *

Robert A. Bier, M.D., Major, National Headquarters, Selective Service System, Washington, D. C.: "Your personal and official hospitality, and the kind attention

of your Society, endeared them to me, and left a most favorable impression of my short stay in your state. My only regret is that I was not able to visit with you longer and enjoy further your splendid hospitality."

* * *

James L. Gamble, M.D., Boston. "I very much enjoyed my visit to Grand Rapids and wish to express my sincere appreciation of the courtesy and entertainment which I received. The hospitality offered me by the members was intensive."

Chester S. Keefer, M.D., Boston: "You are to be congratulated on the arrangement and conduct of a most successful meeting and I feel certain that both the guests and the members of your Society benefitted greatly by the meeting. Thank you for a very pleasant visit to Grand Rapids at the time of your annual session."

* * *

George W. Kosmak, M.D., New York: "May I take this opportunity to acknowledge the many courtesies extended by your members. The meeting was most enjoyable and the proceedings of great interest and value. The arrangements for the comfort of your guests were perfect and I shall always look back with a great deal of pleasure to my visit to Grand Rapids in 1941."

* * *

Charles E. Lyght, M.D., Northfield, Minn.: "The arrangements before and during my visit to the meeting in Grand Rapids were nothing short of perfect. I assure you it was a great pleasure to be present and I want you to know how much I appreciate the attentive courtesy of my 'ubiquitous host,' and the many others who anticipated my wants almost before I was aware of them myself. The whole meeting had a distinctly friendly touch."

* * *

William S. Mengert, M.D., Iowa City, Ia.: "I would like to take this opportunity to say that your meeting was one of the best organized and well managed of any I have attended, and the hospitality shown me was superb. It was indeed a pleasure to attend the meeting of the Michigan State Medical Society in Grand Rapids and to address your General Assembly."

* * *

H. G. Poncher, M.D., Chicago: "I think your meeting was as well organized as any state medical society I have ever visited. You have a splendid group to talk to, and I enjoyed fraternizing with the men. I had as nice a time as I have ever had at any state medical meeting."

* * *

Francis E. Seneer, M.D., Chicago: "I enjoyed being in Grand Rapids very much and felt that the meeting was conducted in an unusually well organized manner. I appreciated the opportunity of meeting many of my old University of Michigan friends on that occasion."

* * *

V. P. Sydenstricker, M.D., Augusta, Georgia: "I assure you that my visit to Michigan was enjoyable in every way. The meeting seemed to me to outclass any state meeting which it has been my privilege to attend in the subject matter of the program and in the interest and earnestness displayed by those attending. The constant kindness and solicitude of my ubiquitous host almost shamed me for I know what a serious interruption I was to his routine. Please express my thanks to The Council for their kindness and accept my personal expression of gratitude to you for the opportunity to attend your meeting."

* * *

Carroll S. Wright, M.D., Philadelphia: "I do not think I ever attended a medical meeting where so much effort was put forth to make the guest speakers enjoy themselves. I thoroughly enjoyed the annual meeting of the Michigan State Medical Society."

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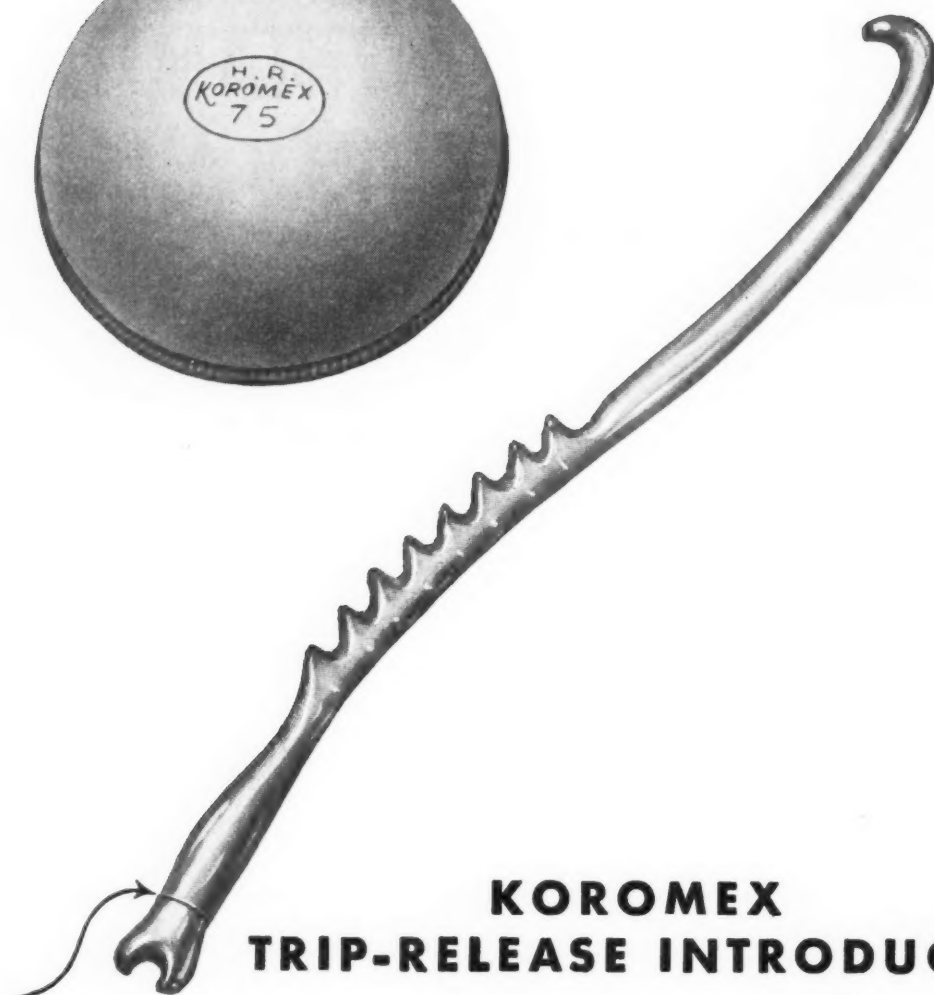
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- (3) The total caloric value of the formula should be approximately 50 to 55 calories per pound (110 to 115 calories per kilo) of body weight per day.
- (4) The amount of water added to the formula will be two to three ounces per pound (130 to 200 cc per kilo) of body weight per day; and the amount of water added to the formula for the 24-hour period depends upon the degree of dilution required to render the mixture digestible.
- (5) The amount of formula offered at a feeding during the first few months is expressed by the rule—Age in months plus two ounces at four-hour intervals."

KUGELMASS: "Newer Nutrition in Pediatric Practice." 1940.

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¹ Jeffcoate, T. N. A.: *Brit. Med. J.* 2:671 (Sept. 30) 1939.

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